

Few graduates 'see industry's challenge'

by Sue Reid

Too few graduates recognize the opportunities in industry for intellectual probing and demanding responsibility, Dr George Talley, principal of Sheffield City Polytechnic, warned this week.

Throwing out a challenge to industrialists he said the message that important intellectual and social challenges lay in industry had to be put across to graduates.

Speaking at a polytechnic seminar on graduate preparation for employment Dr Talley outlined the criticisms often voiced by the newly-recruited graduates to industry. Insufficient responsibility, boredom, inaccurate performance assessment, and poor communication were the central problems.

He said: "I am not seeking either to justify or to deny their criticisms. It is sufficient for me that they are voiced, sometimes vociferously, sometimes grudgingly. They indicate some of the expectations of the newly-recruited graduate that are not fulfilled."

The first job, either for a fully-fledged graduate or for a sandwich-course student, could be a traumatic experience. The routine was quite different to full-time education. Freedom in the use of time was severely constrained and there was an emphasis on team work rather than individual achievement, he said.

There was a responsibility on the graduate to face up to these changes before meeting them but equally there was a responsibility upon the employer to make it clear from the outset what demands were likely to be made. Dr Talley told the seminar, which was attended by industrialists and educationists, that every worthwhile initial job was a training situation that had to include the giving of responsibility and the assessment of potential.

Acceptance of responsibility meant delegation and the risk of making mistakes which had to be lived with afterwards. One of the greatest disappointments for many graduates was the discovery that making mistakes did not seem to matter and could be easily covered up. That led to the development of an attitude which they took with them to a higher level of industry, he said.

Mr Bernard Cotton, chairman of Samuel Osborn Ltd, told the seminar that the potential polytechnic graduate should select a course that would lead to employment. It was no longer sufficient to pursue one in the hope that the final qualification would be the right one for a good job.

In order to make the correct choice a student needed career guidance as early as possible, certainly during the last years at school. The earlier a student decided the earlier he could study the right subjects at school to prepare him for the right polytechnic course, he said.

Manpower plans should be uncertain—Barron

by Frances Hill

Manpower planning in higher education should be based on uncertainty, Sir Donald Barron, a member of the Council of the Confederation of British Industries and of the University Grants Committee, said on Tuesday.

He said the need for planning in areas like accountancy, engineering, and engineering was obvious, "but there are others where the demand in both type and quantity is very uncertain."

Manpower planning should be flexible enough to keep options open in a rapidly changing social and economic environment, he said.

It would be the most dangerous planning approach to gear the supply to a single authoritative judgment of the perceived specific demand, as happened in the well-known cases of medical and teacher training places, Sir Donald told the annual conference of the Standing Conference of Employers of Graduates in Nottingham.

He cited the explosion in demand for undergraduate law places and the emergence of large accountancy firms as major employers of graduates as unexpected developments in the field of manpower planning.

Relevance in higher education should be regarded as a spectrum, Sir Donald said. At one end were chemists, physicists and computer scientists who fill an immediate need. At the other were those who contribute "a trained, disciplined and hopefully imaginative mind, with width as well as depth."

He said the freedom of student choice and of the autonomy of educational institutions, "don't think there is evidence that the judgments of a system unresponsive to the requirements of industry and commerce."

Exams planned for fellowship

The Institute of Chartered Accountants is going ahead with its plans to grant fellowships to accountants who pass an examination in practice five years after qualifying and to those working in industry and elsewhere after 10 years.

Although the institute has given no firm date for beginning the new arrangement there has been a clear statement of intent by Mr A. B. Sainsbury, the institute's secretary for education.

NEXT WEEK

Keith Hampson on regional coordination

Linguistics teaching

University research

Sunderland Poly's new education faculty

The Murray report

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Overseas continued

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Applications are invited for the academic positions listed below, which may be available in 1977. Further vacancies in the schools of Social Sciences, Business and Administration, Applied Science and Educational Services will be advertised in this newspaper on 16th July, 1976.

The Institute is a major tertiary institution located in Perth. All courses are characterised by a multi- and interdisciplinary approach to a higher education. Awards at degree and post graduate level are made.

SCHOOL OF THE ARTS AND DESIGN

ART AND DESIGN—SENIOR LECTURER/LECTURER

Teach and provide educational leadership in one of the following: painting sculpture, printmaking, foundation studies. A degree or equivalent and tertiary teaching experience in fine arts required. Visual documentation of professional work should be included with applications.

TOWN PLANNING—SENIOR LECTURER/LECTURER/SENIOR TUTOR/TUTOR

Teach, co-ordinate and develop courses in town and regional planning and supervise practical student projects.

Applicants should be qualified for full membership of the RAPI or the RTPI. Practical experience and knowledge of dynamic planning, systems theory, cybernetics and computer use desirable.

ENGLISH—SENIOR LECTURERS/LECTURERS/SENIOR TUTORS/TUTORS

(several positions). Teach in one or more of the following: Australian studies, creative writing, film and television, journalism, literature, theatre arts, writing.

Preference will be given to applicants with higher degrees and/or substantial experience in more than one of the above listed areas.

SCHOOL OF TEACHER EDUCATION

COURSE CO-ORDINATOR: Responsibilities will include academic staff recruitment, assignment of staff to teaching functions, staff development, education research projects and inservice education for teachers.

SENIOR LECTURERS/LECTURERS: (3 positions)

(i) Educational Psychology: Teach learning theory and growth and development. (ii) Analysis and Strategies of Teaching: Teach classroom observation techniques, classroom climate, microteaching and classroom organisation. (iii) Curriculum and Instruction: Teach curriculum theory development with specialisation preferably in art or music.

LECTURERS/SENIOR TUTORS/TUTORS: (4 positions)

(i) Educational Psychology: Teach learning theory and growth and development; or learning disabilities. (ii) Field Practice: Teach theory and practice of teaching with supervision of student teaching at early childhood or primary (elementary) levels. (iii) Curriculum and Instruction: Teach in specialised areas of art, music, creative movement or reading; or general curriculum theory and development. (iv) Educational Technology: Teach a general curriculum approach to the use of technology.

Applicants should have a degree or equivalent qualification appropriate to the job requirements and teaching experience.

SCHOOL OF HEALTH SCIENCES

MEDICAL TECHNOLOGY—LECTURER/SENIOR TUTOR/TUTOR

Teach medical microbiology and bacterial genetics. A higher degree and teaching experience in the above-mentioned fields required.

SALARY SCALES: (at the current rate of exchange)

Tutor £816, Lecturer £816-£816, Senior Lecturer £816-£816, Senior Tutor £816-£816, Course Co-ordinator £816, 14,478. Salaries are payable in Australian Dollars.

CONDITIONS: For permanent staff conditions include:

For short-term staff superannuation (similar to FRSI), six weeks' annual leave and assisted study leave.

For short-term staff superannuation, assisted study leave and long service leave conditions do not apply.

APPLICATIONS: Detailed applications, including a curriculum vitae and the names of three referees, should be submitted not later than 13th August, 1976 to the Migration Liaison Officer, Western Australia House, 115 Strand, London, W1A 0AA, England. A brochure containing detailed information may be obtained from the

When applying please quote reference HES.

NURSING—SENIOR LECTURER/LECTURER

Teach continuing education nursing programmes for practising registered nurses and carry out administrative duties.

LECTURER/SENIOR TUTOR/TUTOR

Teach medical/surgical or mental health and psychiatric nursing and organise appropriate clinical experiences for undergraduate students. Applicants should be registered medical or psychiatric nurses and have appropriate tertiary qualifications.

PHYSIOTHERAPY—SENIOR LECTURER/LECTURER

Teach the practice and application of physiotherapy techniques they relate to neurophysiology, neurology and neurosurgery.

LECTURER/SENIOR TUTOR/TUTOR

Teach general aspects of physiotherapy, particularly relating to sports medicine and other orthopaedic conditions.

A degree and wide clinical experience, including the supervision of students required.

LECTURER/SENIOR TUTOR/TUTOR

Teach morphological, functional and applied anatomy to therapy students.

A higher degree and expertise in neuro-anatomy required.

CHIROPODY—SENIOR LECTURER/LECTURER/SENIOR TUTOR/TUTOR

Teach and develop all aspects of chiropody training and education. Experience in curriculum design, course organisation and appliance making required.

OCCUPATIONAL THERAPY—SENIOR LECTURER/LECTURER

Teach and supervise clinical practice with particular emphasis on psychiatric occupational therapy.

LECTURER/SENIOR TUTOR/TUTOR

Teach one or more of the following: sensory integration, community welfare, psychiatric occupational therapy.

LECTURER/SENIOR TUTOR/TUTOR

Develop a programme in health psychology relevant to the needs of professional paramedical areas and undertake undergraduate teaching in basic psychology with application to therapy courses.

Applicants should hold qualifications recognised by the World Federation of Occupational Therapists and have clinical and teaching experience.

SCHOOL OF MINING AND MINERAL TECHNOLOGY

GEOLOGY—SENIOR LECTURER/LECTURER

Teach, develop and supervise the course in mining geology at the W.A. School of Mines, a branch of the Institute located at Kalgoorlie. Applicants should possess a higher degree and be experienced in Archean geology, preferably both in the field and underground. A good knowledge of ore genesis, igneous petrology, structural geology and the broader aspects of stratigraphy, together with tertiary teaching experience is desirable.

SALARY SCALES: (at the current rate of exchange)

Tutor £816, Lecturer £816-£816, Senior Lecturer £816-£816, Senior Tutor £816-£816, Course Co-ordinator £816, 14,478. Salaries are payable in Australian Dollars.

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THE TIMES Higher Education SUPPLEMENT

July 16, 1976. No. 247

Price 15p

Further teacher intake cuts likely

by David Hencke

The Department of Education and Science has effectively abandoned its 1981 intake target figures for all colleges of education and polytechnic departments of education. Letters sent out to colleges and polytechnics over the past week confirm that the new teacher training total in 1977 is well below the 50,000 announced by the DES last year.

Suspicion is growing among college principals and the National Association of Teachers in Further and Higher Education, that the department may have exceeded the cut-back of 8,000 undergraduates and certificate students announced last month (7/15, June 25). All the available evidence points to a new total of between 51,000 and 57,000.

These new cuts, announced after most colleges have closed for the summer vacation, have come as a surprise. Initial teacher training students have been cut across the board by between 30 and 50 per cent. Even small departments have suffered, some reduced to little more than 200 students. Among these are Thomas Huxley College, Ealing; Charlotte Mason, Ambleside; North Riding, Scarborough and the North East London Polytechnic.

In every case the figures are below those submitted by the colleges and polytechnics to meet a rationalization of teacher training exercise started by the department in January, and new cuts will have to be introduced in most.

The main effects of the new letter are:

● Initial teacher training numbers have been reduced below numbers expected in 1978. Leeds Polytechnic has been given a target of 185 for 1977 instead of 200 and Worcester College of Higher Education 120 in 1977 instead of a planned 132 in 1978.

● Output figures have been allocated to every college and polytechnic to ensure that they achieve a 14 per cent wastage rate, the national average, on every course. Although East Sussex College of Higher Education can admit 160 students in 1977, only 130 are expected to qualify for example.

● Postgraduate teacher training figures have been reduced across the board in most cases, although where courses are very small, as at Sunderland Polytechnic, they have been closed.

continued on back page

Proposed art validation body rejected

by Sue Reid

The Government has refused to set up a national body to validate vocational courses in art and design. The decision was announced this week in the House of Commons by Mr Fowler, Minister of State for Education.

He said the Technician and Business Education Councils and other relevant bodies would be consulted about validation but that the establishment of an autonomous validating body would be inappropriate.

The establishment of such a body was the central proposal of a special working group report on vocational courses in the design technician area which reported back in 1974. The working group was set up in 1971 as a result of the earlier Hazlegrave report on art and design.

Subsequent to the Commons announcement Mr Fowler told the Association of Art Institutions' annual conference in Bangor that the Government would consult TEC, BEC and other relevant bodies with the aim of establishing validation machinery that duly reflected the interests of both the existing councils and ensured a course structure compatible with their own. But at the same time the machinery would give due weight to the expertise and approach of artists and designers.

The Government's decision to reject the working party's key proposal is likely to bring a protest from artists and designers in education. They are strongly opposed to having vocational art and design courses validated by TEC or BEC.

Mr Roger Hampson, principal of Bolton College of Art and Technology, secretary of the AAT conference, said this week that he was disappointed by the Government's decision. "The TEC were not appropriate validation bodies for art and design."

The association has considered putting itself forward as an appropriate validation body for non-art and design courses and is still examining this line of action. Delegates at the conference voted in favour of calling on the secretary of state for England, Scotland, Wales and Northern Ireland to recognize the association as the appropriate body to represent all aspects of art and design education at post-secondary level.

THES circulation

The circulation of *The Times Higher Education Supplement* for the period January to June 1976 was 25,539. This is 1574, or eight per cent, more than during the equivalent period last year.

Annual stocktaking shows universities uneasy about future

by Peter Scott

Uneasy prognostications about the future of the universities over-shadowed traditional—and quite legitimate—mutual congratulation in the graduation addresses of many vice-chancellors at the end of the summer term.

Some, like Dr R. B. Hunter, vice-chancellor of Birmingham University, and Professor Robert Steel, principal of the University College at Swansea, took this public opportunity to re-emphasize the quality and efficiency of university education.

Others, such as Mr James Drever, principal of Dundee University, were in a more reflective mood and looked forward to the kind of political and economic environment in which universities would find themselves in the 1980s.

Lord Hinton of Bankside, chancellor of Bath University, was more blunt last week. He said: "The university should be asking itself whether it has any responsibility for only about half of last year's graduates going directly into productive industry, in jobs that make a direct contribution to the gross national product."

It was a serious worry that the percentage going into central and local government service had increased from 6 per cent in 1968 to 17 per cent in 1975.

Lord Hinton said: "For reasons which I suspect are those of short-term convenience rather than of long-term national need, the University Grants Committee is encouraging us to move still further towards courses in the humanities, but I hope that this pressure will be resisted."

Dr Hunter at Birmingham was unambiguous for the next five or six years the age group from which students are drawn will be increasing. After that it starts to decline and the decline is continuing."

Mr Drever told Dundee graduates that educationists were only just beginning to come to terms with the realities which faced them as a result of the falling birthrate and the changing pattern of salaries.

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Government to set up inquiry into polys

by David Walker

The Government is to set up a committee to inquire whether the polytechnics ought to be reorganised on a national basis and how the work of the universities and polytechnics can be coordinated, Mr Mulloy, Secretary for Education, announced this week.

The committee, under the chairmanship of Mr Fowler, Minister of State for Education, will include representatives of the local authorities, further education teachers and polytechnic directors and heads of further education colleges.

Mr Mulloy said the committee would carry forward discussion started last year in response to proposals from the Council of Local Education Authorities for further education advisory councils in the regions.

Addressing the CLEA annual meeting in Manchester, he reminded the local authority representatives that the response to the proposals from teachers in polytechnics and the universities was unfavourable.

The CLEA memorandum did not go far enough, Mr Mulloy said. First, it gave insufficient recognition to the national as distinct from regional character of higher education; second, while it offered an elaborate regional structure of committees it did not address itself explicitly to the problems of management or the role of the committees in improving it; and third, it offered no solution to the problem of accountability, industry and academic control of institutional development.

The new committee would answer the question what regional and national machinery ought to be established to meet these objections. An "effective management system" was needed. Together, the local authorities, the National Association of Teachers in Further and Higher Education and the Committee of Directors of Polytechnics could move towards consensus, he said.

Mr Mulloy also promised Government action on the needs of 16-18 year olds. A statement would soon be made on the educational needs of school leavers who had not found jobs.

He defended the record of educational planners who could not have known that the Houghton report would cause so many teachers to stay in the profession and block opportunities for the newly trained.

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ILEA agrees 1,700% rise in business school rent

by Sue Reid

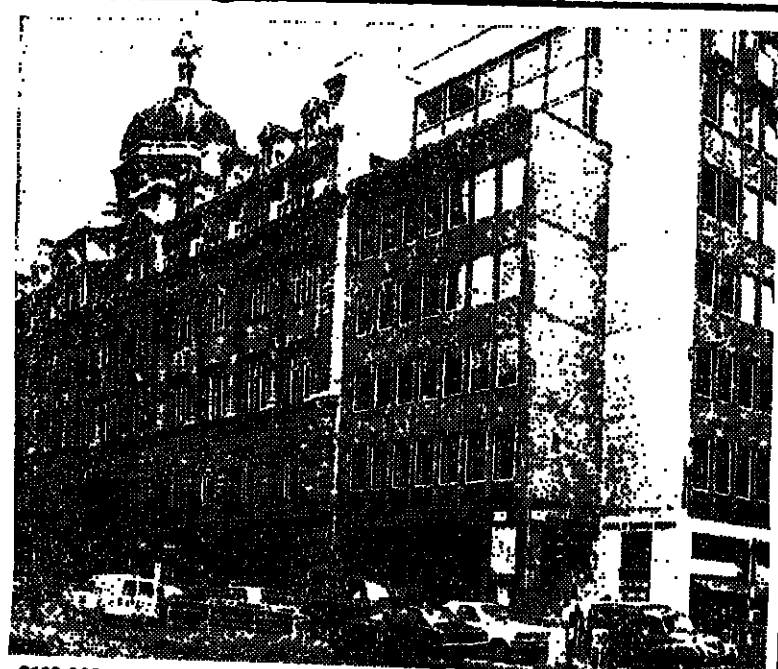
The Inner London Education Authority is planning to pay an extra £2.89m over the next 15 years to keep the City of London Polytechnic School of Business Studies in its present home.

The authority plans to pay out £205,000 a year in a new arrangement to secure the school's prime site in the heart of the City. The previous annual rent was £12,000 and the need to pay the extra arose because one main lease is due to expire and alternative premises in London's dockland will not be ready for some years, if at all.

The new rent deal, starting this year, was this week still awaiting final approval by the ILEA education committee. Councillors were expected to give the go-ahead although the enormity of the new rent could meet with disapproval in some quarters.

The deal is something of a necessity. In the past year the polytechnic and the ILEA have been negotiating with Tower Hamlets Borough Council which owns 106 acres of dockland. They hoped to reserve a site for new polytechnic buildings but talks are still at a delicate stage.

Faced with the prospect of the deal falling through and the main lease on the business school's building due to expire in two years negotiations to secure a new lease were started with the City of London Corporation, which acts for a charity which owns the site.



£193,000 rent rise for City of London Polytechnic Business School.

The ILEA and the polytechnic agreed to surrender the two existing leases on the building early in 2006—and take over a completely new lease. The old leases were negotiated more than 20 years ago when the site was occupied by the now defunct City of London College.

The new lease will run from last December so this year the ILEA faces a rent bill of £289,000 for 16 months' use of the building. The £205,000 yearly rent will be subject to an upward review in five years' time and again in 1986.

Dr Arthur Suddaby, provost of the polytechnic, said this week that the college and the ILEA had been forced to negotiate the new lease and rent because it was unlikely that any alternative buildings would

be completed in the dockland area until 1981 at the earliest.

Negotiations were still going on with the Tower Hamlets Borough Council and it is hoped that a site could be secured.

Dr Suddaby said the polytechnic had inherited the business school building at a "peppercorn" rent in 1970. The new rent was not expensive by comparison with many in the City, he claimed.

At the same time as the ILEA education committee was meeting to make a final decision on the new lease the City of London Dockland Development Study Committee was discussing the polytechnic's plan for a new site on the Tower Hamlets land. If approved it could be the first step towards the polytechnic getting long-awaited new premises outside the expensive City area sometime in the 1980s.

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Librarians attack UGC 'steady-state' report

by Alan Cane

Representatives of national and university libraries have condemned a University Grants Committee report on library finance. The report, published at the end of April this year, recommended that libraries should be limited in size, removing little-used stock to stores and drastically curtailing space available for acquisitions.

The Standing Conference of National and University Libraries has rejected this concept of the "self-renewing library".

While recognizing the serious problems associated with adequate funding giving the present period of constraint, the standing conference regretted that the UGC's formulation of the terms of reference of its working party on the limited basis of financial and economic constraints should be applied to the management of academic libraries "in a manner affecting their long-term development" and should change the traditional role of these libraries. It also had misgivings that there was insufficient evidence to support the recommendations, whose consequences were unforeseeable.

It said: "The UGC would appear to have selected libraries for singular and special constraint in a manner which conflicts with its declared principle of individual institutional autonomy, by removing from these institutions their right to assert their own priorities."

"The growth of subject coverage and expansion of student numbers have arisen out of implementation of the Robbins Report but the UGC has adopted measures in an attempt to deal with the symptoms rather

than the causes; the library teaching and research of the time which they serve."

It was with "very great concern" that the Standing Conference noted that the UGC's future policy of self-renewal rejected the concept of self-renewal by a crude measure of dealing with a complex problem.

It was based upon inadequate needs of scholarship, particularly in economic terms, a renewal of the library's role.

The proposal that the UGC should through reliance on used material to the British Lending Division placed a dependence upon a single source, with unforeseeable consequences.

There was ample evidence to show that the UGC's proposal would lead to the loss of useful material in the hands of research and scholarship in the library in local and national contexts.

For these reasons the Standing Conference was disappointed that the report was "perpetually" immediately accepted and issued without further discussion with the academic community.

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SSRC awards grant for guru study

by David Walker

The Social Science Research Council has awarded £750 for a sociological study of the Guru Maharaj Ji and his followers in the Divine Light Mission.

The Indian prophet will be the subject of three years' study by Mrs Maeva Price, a principal lecturer at Chorley College of Education, now part of Preston Polytechnic.

But the grant is small compared with the SSRC's £620,000 awards total of which £2,500 is to be spent on studies of home-grown religion.

Dr R. C. Towler, of Leeds University, will get just over £1,000 for his study of the career structure of Anglican clergy and a team from the department of government at Manchester University are to spend £1,500 on their year's research on the Church of England.

Sociologists from Essex and Keele Universities and from Manchester Polytechnic are to receive about £35,000 for research into sex differences and the division of labour between men and women. Professor Ronald Frankenberg of Keele will lead a team in a 16-month study of

gender and class-consciousness at home and work in a North Staffordshire village.

Meanwhile at University College London Professor Rayner Banham has been awarded £11,500 for a two-year study of political and ideological aspects of the growth of owner occupation.

Details of these projects are contained in the latest edition of the SSRC Newsletter, which also includes reports of the various subject committees of the council. Most of these reports bemoaned the likely reduction in funds available for social science research, but emphasized that some adjustments have to be made in the grant-giving system.

The sociology and social administration committee, for example, reported an imbalance between the subjects of postgraduate students and those for which research grant applications were made by qualified academics.

Particularly popular among postgraduate award holders were theoretical sociology, sociology of art and literature, political sociology, sociology of youth and culture; sociology of knowledge and science and women's studies.

The report added that topics chosen by postgraduates reflected their lack of time and money. A subject like the sociology of art and literature was a relatively economical way of obtaining a PhD whereas sample surveys of consumer attitudes were both expensive and time consuming. However the latter was much better research training, it said.

The political science and international relations committee reported its concern about the use to which SSRC funds had been put and suggested that applications for grants should not be considered until a satisfactory account of the work done with any previous grant was given.

The economic committee decided that research grant applications would have to be cut in order to sustain postgraduate training and a reserve fund.



£750 for study of Guru Maharaj Ji.

Fowler pledge on adult 'think tank'

by Sue Reid

A firm pledge that a national advisory council for adult education will be set up next year has been given by Mr Fowler, Minister of State overseeing higher education.

He told leaders of the National Institute for Adult Education this week that the long-awaited "think tank" first proposed in the 1973 Russell report, will be established once detailed talks on the structure and purposes of the body get under way in the autumn.

A key consultative document on the proposed council has been prepared by the government and is already in the hands of local education authorities. It will be distributed among adult education bodies in the next few weeks.

The establishment of the council will also confirm this week by Mr Hughes, president of the Workers' Educational Association and principal of Ruskin College, Oxford. He told the Council of Local Education Authorities' conference in Manchester that the Department of Education and Science was now clearly committed to the early formation of a national advisory council to act as a centre for innovation and planning in adult education.

It was hoped to make rapid progress towards final decisions on the council's terms of reference, structure and links with the national institute in the autumn.

Mr Hughes hoped the council would be able to raise funds for experiment and research. Its members should include people from the providing adult education bodies, the professional staff, and unions and adult students, he said.

The council would need to have the necessary freedom and independence to be involved in innovation and stimulate constructive dialogue. It should have the right to publish its own reports.

Mr Hughes said adult education provision could be doubled for about 10 per cent of the national education budget.

Vocational degrees are 'no passport to safe careers'

by Owen Surridge

Vocational degree courses are now no longer passes to safe professional careers. Many more graduates will find themselves obliged to accept more humble employment and their higher education may prove a hindrance to their adaptability in such matters as retraining and seeking out fresh opportunities.

Mrs Lillian Teeman, careers adviser to Nottingham University, expressed this view at a conference of careers teachers on Friday. Although those reading medicine were probably safe that no longer applied to intending teachers, town planners and librarians.

"Clearly we are not very good at manpower planning" and those who know something about it are most inclined to stress both the complexities of the exercise and the improbability of accuracy. So the rush to vocational courses carries no guarantee but it does pose a threat to the universities and to education because it leads to an undervaluing of non-vocational degree courses."

In consequence students on such courses tended to undervalue themselves and society was now confronted for the first time with the phenomenon of the apologetic arts student.

Probably at most one third of graduates went into those sectors of the economy which produced or provided a marketable degree, she said. Perhaps 60 to 65 per cent of the universities' output went into jobs where they drew their salaries from the public purse.

The National Association of Careers and Guidance Teachers has also put in an urgent request for a meeting with the Department of Employment to discuss the plight of unemployed school leavers.

The Wolfson Foundation's grant is the second of its kind. In 1973 it offered a sum of £500,000 which has gone towards providing an extra 2,000 places. Grant applications should be made to the foundation, 251-6 Tottenham Court Road, London W1A 1BZ.

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Hardship fund for overseas students hint

by Francis Gibb

The battle over foreign students' fees was by no means over, Lord Gladwyn, the chairman, told the United Kingdom Council for Overseas Students Affairs' general meeting at Exeter University this week.

No one could be certain that fees would not be raised once more, even if the principle of non-discrimination against overseas students was observed, he said.

He warned that the present situation was grave and that there would be real hardship for many overseas students, particularly those in the middle of their studies.

It would be UKCOSA's job to plead with the Government either to exempt those already on courses from the effects of the increases, or to set up a large hardship fund like that set up when the fee differential was first introduced in 1967.

The increase in fees of 100 per cent over the past two years was a real blow to students from developing countries, Lord Gladwyn said. The Government must be persuaded to give practical effect to its White Paper, *More help for the Poorest*. It could, for instance, create a large number of awards under the Overseas Students Fees Awards Scheme.

He reiterated UKCOSA's view that there should be one person in the Government responsible for all the problems posed by overseas students. He commended Mr Mulley, secretary of state for education and science, and Mr Fowler, minister of state overseeing higher education, for putting up strong resistance to extreme proposals for fee increases but said it would be preferable for the power of initiative to lie with a minister attached to the Foreign and Commonwealth Office.

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News in brief

Guide to student grants published

A brief guide to mandatory grants which local education authorities must pay students on higher and further education courses has been issued by the Department of Education and Science.

The guide gives full details of grants available, how to claim them and how they are calculated. A similar guide for Scottish students has been prepared by the Scottish Education Department. They are available, free of charge, from the Information Division, Room 1/27, Department of Education and Science, Elizabeth House, York Road, London SE1 7PH.

Buckingham buys houses

The University College at Buckingham is to purchase 18 houses now under construction to accommodate students joining the college in January, 1977. About 110 new students are expected, bringing the total to 180.

Bicentennial booklist

Professor Desmond Wright, director of the Institute of United States Studies in London University, has compiled an extensive list of books about America by British writers entitled *The Special Relationship*. Copies are available from the National Book League, 7 Albemarle Street, London, W1. Price 75p.

TV script course planned

Sheffield University has been awarded a £2,000 grant by Yorkshire Television to finance a postgraduate studentship in television scriptwriting. The successful student will read for a master's degree and submit a thesis on writing for television. It will be the third such fellowship to be awarded by Yorkshire Television but the first in association with Sheffield University.

New Titles from NFER Teaching and Learning in Higher Education

Alice Helm
This book stresses the view that the knowledge of a specialist in a particular field, whilst necessary, is not sufficient to ensure effective communication of it, and that the arousal of interest and of criticism may be as important a factor in education as the imparting of facts. £3.50

Aptitude Testing at 18+

Bruce Choppin and Lea Orr
NFER Report concludes the long-term study of a Test of Academic Aptitude to supplement traditional types of sixth-form assessment. £3.50

The Scottish Sixth:

A Sociological Evaluation of Sixth Year Studies and the Changing Relationship between School and University in Scotland
A. McPherson and G. Neave
A discussion of the current state of experience in Scottish sixth form education including its relationship both to university and to earlier years in the secondary school, and containing an evaluation of the Innovative Certificate of Sixth Year Studies. £3.95

Piagetian Research:

Compilation and Commentary
Dr. Sohan Modgil and Celia Modgil
Foreword by Professor Barbel Inhelder, University of Geneva
Following the success of Piagetian Research published in 1974, a new series of eight volumes is now in preparation for issue during 1976. These volumes will bring together the most up-to-date published and unpublished research inspired by the work of Jean Piaget.

Features of the Series

Fifteen areas of 'cognitive' development are covered
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The eight volumes may be purchased separately or as sets (Standing Orders accepted)
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Sedgley Park College to close

The Department of Education and Science is to close the Roman Catholic Sedgley Park College of Education in Manchester. The college will have its last intake this September. The closure brings the total number of institutions catering to train teachers up to 18 since rationalization of the colleges began in April 1973.

Originally it was proposed to link Sedgley Park with De La Salle College of Education, another Roman Catholic college situated at Hopwood Hall, Middleton, on the outskirts of Manchester. Plans were drawn up for a joint course charter University.

The plans were dropped a month ago after it became clear that the total student numbers of 1,500 in both institutions were unlikely to justify developments.

De La Salle College is now to be developed as a 300 student college concentrating mainly on teacher training courses and a limited

number of new BA and BSc degrees. A total of 750 students will take other degree courses.

Sedgley Park College is expected to close by July, 1980, and its buildings in Prestwich put up for sale. It has 580 students, with accommodation for over 160 on campus.

Mr George Regan, vice-principal, said this week: "The department's letter which gives us a nil intake for 1977 has not come as a surprise. The future of the institution's buildings will now be in the hands of the Catholic Education Council."

©The future of Cullum College of Education, Abingdon and the College of All Saints, Tottenham, in the balance this week as each awaited letters on its student intake for 1977.

The DES has delayed sending out the intake figures for Anglican colleges because it has still not had final consultation with the Church of England Board of Education on which, if any, to close in the light of the recently announced cuts.

Lord Seebomh opposes course closure

by David Walker

Lord Seebomh, the banker who chaired the committee on reorganisation of local authority social services in 1969, last week promised to support staff at the Polytechnic of North London in their campaign to prevent the closure of a social work training course.

He told a meeting of 300 former students on the course that he was convinced there was a place for it and praised its staff.

The two-year emergency social work training course was set up in 1968 to cater specially for older entrants to social work and whose changing their career. It was funded directly by the Department of Health and Social Security.

Two years ago it was decided to close the course and the Central Council for Education and Training for Social Work recommended that provision for older entrants could be made elsewhere.

Staff have renewed their efforts to prevent closure in recent weeks because an official report on manpower needs in the social services has recommended the expansion of whom the PNL course was established.

The meeting heard of Lord Seebomh's belief in the need for expanded professional training for social workers. But he added there ought to be a place in social work for older entrants. The ideal of professionalisation should not exclude the community's need to care for the deprived and handicapped.

Lord Seebomh urged a revision of the grants system for training social workers. It could be that the high turnover of staff was due to untrained social workers joining authorities with a good staff training programme, records only to leave once trained was completed.

The British Association of Social Workers is understood to be preparing a recommendation for a national system of grants for training that would remove some of the local authorities' discretion in giving grants.

Lord Seebomh said unpublished evidence showed that the report of his committee on personal and allied social services had been successfully implemented.

Figures show relatively fewer leave school with A level

by Frances Gibb

The proportion of school leavers gaining one or more A levels has dropped in the last two recorded years, according to the Department of Education and Science's latest volume of statistics of education. Of the 20 per cent of school leavers in 1971-72 to 15 per cent in 1973-74.

Many more are passing examinations, but these passes are mainly at Certificate of Secondary Education and O level.

Of the 100,000 school leavers who gained A levels, four fifths had two or more passes.

There has been a steady drop in the percentage of school leavers passing two or more A levels in science subjects from 4 per cent in 1964 to 32 per cent (27,000) in 1974.

هكذا في الأصل

David Hencke reports on Sunderland Polytechnic's newly-formed faculty of education

From protest march to success story in merger's first year

The merger of Sunderland College of Education and the department of teaching studies in Sunderland Polytechnic last September to form the new polytechnic faculty of education was not exactly greeted with enthusiasm by students.

Like the former college principal, Mr. H. Armstrong-James, the college students saw the merger as a polytechnic takeover, which could lead to the closure of their student union.

They marched in protest through the streets of Sunderland and supported an alternative plan to move the polytechnic teaching studies department to the college and keep teacher education a separate entity from the city's polytechnic.

Even when the merger became a fait accompli one student was nearly expelled for stealing the polytechnic's set of new signboards, pronouncing that the former college was now part of the faculty of education.

Now nearly a year later much of the student criticism of the scheme has subsided. Although there are still rumblings from older students at the imposition of impersonal bureaucracy on a small self-contained community of 750 students and 75 staff, the merger has begun to show very real benefits.

Much of the impetus for the merger's success has come from Mr. Harry Webster, the new dean of education. Unlike a number of college-polytechnic mergers, where heads and principals of former institutions are competing for new posts,

at Sunderland's both the principal of the college and the head of the teaching studies department remained. This left the way for a new appointment and Mr. Webster, whose previous educational appointments included posts in Trent and Northern Ireland polytechnics, was offered the job.

His reputation is as a curriculum planner which is an entirely different tradition from many college principals. He avoids the role of a paternal figure with an interest in administration. He prefers to leave the administrative running of the faculty to his deputy.

Mr. Webster inherited two diverse traditions in Sunderland. The polytechnic department had previously concentrated on providing a wide range of in-service courses. This he has developed further.

The second tradition, inherited from the college, was one of the small, personal, academic community concentrating mainly on certificate level work.

Mr. Webster found this academic horizon rather restricting and has concentrated with considerable staff support in preparing to change the academic atmosphere of the place. He is keen to keep the personal atmosphere where every student knows everyone else, but wants to end some of the staff and students' dependency on academic leadership from the top.

"One of the most extraordinary things I found when I was appointed as dean was that some staff, even those in senior posts,

used to ask my permission if they could work at home or leave early. I just don't expect to be asked this. I expect people to decide for themselves," he said.

His belief in self reliance extends much further than time-keeping. It permeates the institution's whole academic process. Staff are encouraged to have ideas, propose courses, and participate in academic planning.

Much planning is on a five-year basis and connected to other developments in the polytechnic, but already some trends are becoming noticeable.

The first is the separation of the academic subject and professional interests of staff. Mr. Webster offered them two possibilities—they could either concentrate on professional studies and remain with the faculty of education, or concentrate on their academic subject and join a new faculty. This has smoothed the way for the cut-back from 1,100 to 500 students in education.

This decision, combined with a new growth in humanities courses, has meant that Sunderland, unlike nearby Newcastle, has survived the merger without a single redundancy.

It has given staff considerable confidence in the new set-up and encouraged them to suggest new courses in the knowledge that jobs are not at stake.

The second major development has been a decision to switch from Durham University as a validating Academic Awards.

Already two highly specialized degrees, BA honours in education and physical science and a BA honours in education and mathematics have been approved and will be recruiting their first students in September. The next stage is a proposal for a new BEd degree for first and middle school teachers which the faculty hope to run from 1977.

There is also a proposal for a BEd degree in business studies and education which is before the CNA at the moment.

The staff, after initial doubts, have welcomed the move away from university validation. A number of them even use the word "liberated" to describe their feelings.

Part of the reason lies in the structure of the existing four-year course. The course was heavily weighted towards academic study and one of the staff's complaints is that there is an 18-month period at the end of the course when students do



Sunderland Polytechnic

not see any children. This is particularly unpopular with students who then go straight into the classroom. The proposed structure of the new course will be completely different. After a common introductory first year with other students, those who wish can opt for the BEd course which emphasizes practical teaching and curriculum studies in the final two years.

The course will be unusual in introducing performance-based teaching methods into the training programme. Mr. Webster, who introduced similar methods at the Northern Ireland Polytechnic, will be pioneering them in England.

This type of teaching is widely used in the United States, but has generally been frowned upon in England because it means assessing student performance in the classroom as part of his degree.

Mr. Webster wants to use the method in both honours and diploma degrees. He is a great believer in training teachers to perform well in the classroom and to develop micro-teaching, simulation techniques and the use of video tapes.

The faculty has also been expanding the work of its in-service programme which it inherited mainly from the polytechnic department. It already estimates that it will exceed the Department of Education and Science quota of 20 per cent provision (100 places) by providing a programme for teachers from schools and further education colleges.

The polytechnic has established a committee to look into the major issues of the new faculty. The committee is made up of representatives from the faculty, the Department of Education and Science, and the University of London. It is expected to report back in November.

ix year controversy should end this autumn when London University submits a Bill to Parliament. The Bill, enabling the university to carry out fundamental constitutional reforms by making changes to its statutes, was assailed by opposition and doubt until the closing day for submissions. While late appeals by the Association of University Teachers and the London School of Economics calling for more power for primary academics may not substantially alter the Bill's final format, they provided flourish at the end of an issue that began when Robbins report urged the university to put house in order. As a result a committee headed by Lord Murray of Newhaven was set up in 1970 to consider "the future of the university London as a federal institution".

The Murray committee, which reported back in November, 1972, proposed substantial changes in the university's governance although it admitted that these were "evolutionary rather than revolutionary".

It made no less than 199 recommendations dealing with every aspect of government. More power for boards of studies, a committee of primary academics, a committee of secondary academics, a committee of tertiary academics, a full-time and salaried vice-chancellor and the possible plans for a new college of Bedford, Queen Elizabeth, Royal Holloway and education colleges.

The new faculty of education proposals, however, have been a different matter. The report, commissioned by the well-known university Grants Committee, also considered how to preserve a preservation of the North Sea as a federal structure, the reorganization of the many schools, colleges and North Riding College, and above all the streamlining of central decision making or Charlotte Mason with a new joint planning committee which would be firmly under academic control.

While the report's 280 pages, which took two-and-a-half years to prepare, evoked admiration from many quarters it was also met with a mixture of reservations and criticisms. In the meantime complaints that while it made developments in numerous proposals for strengthening the central framework it made no operation between self-government on the beginning to the collegiate principle of equality of more students than by early 1973 the university had set up a consultative committee to the Department of Education and Science, and the University of London Act.

For the Department of Education and Science, the committee set out to coordinate the merger, the academic discussion on the report and invited look increasingly to comments from anyone willing to state their views on paper.

From the beginning the major issue was academic self-government. The AUT complained then—and still does—that more academics should be on the university senate than the University of London Act of the same year.

The Hilton-Young report recommended that the vice-chancellor should be an academic and largely titular head holding office for a limited period, burdened by administrative duties. The proposed university disallowed the university could only make statutes "in general accordance" with the Hilton-Young report, subject to "any modifications which may appear to be expedient" but then only with the consent of the schools, colleges and institutions.

The Privy Council rejected the four statutes dealing with the change in role of vice-chancellor and principal but allowed the two

Sue Reid on the much debated London University Bill

BRIEFING

Constitution controversy reaches climax



remaining statutes to stand. The first allowed the senate to elect one of its members deputy vice-chancellor with a two-year term of office and the second resolved that a principal should be appointed by the senate after consultation with the court.

The decision came as a major blow to the university although claimed as a legal triumph for the petitioners.

Sir Cyril Phillips, vice-chancellor, said the verdict undermined the will of many. He had been appointed to the new-style full-time vice-chancellorship in 1974, four years after his original appointment as part-time vice-chancellor. The move was made at the same time as the new statutes were sent to the Privy Council for final approval.

Then a year later came the Privy Council ruling that the statutes were ultra vires. It put the university in a difficult position and there was an immediate protest from Professor Griffith who appealed again to the Privy Council. He said that a decision to pay Sir Cyril an honorarium of £5,000 for his work as full-time vice-chancellor was "part and parcel" of the implementation of the Murray report recommendations.

The university, prior to any protest from Professor Griffith over the vice-chancellorship, decided to abide by the Privy Council ruling, at least in terms of the full-time versus part-time argument. From August, 1975 Sir Cyril reverted to part-time vice-chancellor but the university agreed he should continue to be paid for his work.

Dr Donald Tress, master of Birkbeck College and chairman of the university's joint finance and general purposes committee, said that the new arrangement to pay vice-chancellors was considered a permanent move. Legal advice had been sought before making the decision and there was nothing in the statutes to say that the vice-chancellor should not be paid. The Privy Council has not yet given its verdict about the payments but is likely to do so later this year.

The third report was published in July, 1975, two months after the Privy Council verdict. It outlined the intention to promote a private Bill in the next session of Parliament with the prime aim of removing the restrictions imposed by the University of London Act 1926 on the statute-making powers of the senate. But any hopes of placing the Bill before Parliament in the autumn of 1975 were soon dashed. Some heads of colleges and schools, including Professor Ralf Dahrendorf, director of the London School of Economics, were established in the draft Bill to allow time for debate, consultation and discussion.

The senate decided not to go ahead with the private Bill that year but to allow university members another 12 months for discussion. Subsequently the final report of the consultative committee in October 1975 also recommended that the Bill's promotion should be deferred until this November. Both moves illustrated a clear "climb down" by the university under growing pressure.

A dispute over the central administration and its relationship with

the constituent schools, colleges and institutions was now at the centre of the Murray consultation. Opponents of the constitutional changes argued that the autonomy of the schools and other institutions would be endangered if proposals outlined in the second report—which called for the increased representation of teachers, heads of schools and students on senate but underlined support for a controversial Joint Committee of the Court and Senate for Collective Planning—went ahead.

They also alleged lack of consultation over the establishment of the JCCP, set up by senate in 1973 with the prime purpose of pinpointing priorities of planning policy.

By the time the fourth report was published last October it was widely cited *The Way Ahead*—the proposals for constitutional changes had been modified marginally but did little to please the critics.

The sub-committees on the constitution had always maintained that the schools should retain their academic independence, which should be underpinned by the continuation of the allocation of recurrent resources on a block grant basis from the Court. It said the reforms outlined in the second report were designed not to disturb the present balance of power between the centre and the schools but to strengthen the federal system as a whole.

In the fourth report it made those major proposals:

- a grouping of boards of studies for teacher election to senate, instead of the faculty election system, and the possible co-option of junior teachers;
- all heads of grant-receiving schools to sit on senate ex-officio;
- 10 student senators to be chosen by a much expanded students' representative council with any internal university student eligible for nomination.

The report discussed the purpose, nature and function of the collective planning machinery in some detail and again underlined the university's belief in the JCCP. It said that the body was fundamentally different from the Murray Committee's concept.

But the fourth report also outlined one important factor about the proposed Bill. It said the format should be "simple" and devoid of all statutes, a decision that was subsequently endorsed by senate. Once the Bill was passed, it argued, the new statutes could be introduced.

Twenty-six proposals for constitutional reform in the fourth report were subsequently agreed by senate and a Statutes Revision Committee was established to cast the proposals into draft statutes. But other issues, raised originally by the Murray committee and outlined in last December's fifth and final report, were still largely unresolved.

The report suggested there should be a final round of consultation on the draft Bill so it could be lodged by this November. Consequently when a second draft of the Bill was published in February responses were invited by the end of last month.

The draft Bill was included in a major report of the Interim Joint

The main proposals

Senate should consist of the chancellor, vice-chancellor, principal and chairman of convocation; 30 teachers elected from board of studies; 32 heads of schools (ex-officio); three nominees of non-grant receiving schools and senate institutions; 20 convocation representatives; 12 students; 10 co-opted members from the teaching body and elsewhere.

The Joint Committee of the Court and Senate for Collective Planning should be allowed to develop its potential and concern itself with quinquennial plans, other planning matters, a review of student targets and capital programmes.

There should be an increase from 6 to 10 in Court members appointed by the senate. Three should be chosen from the teacher-elected senators and at least three from the heads of the schools on senate. There should be 24 Court members including three from local education authorities and four appointed by the Privy Council.

The faculty system for senate elections should be abolished and replaced by 20 groups of boards of studies.

Standing Committee of the Academic and Collegiate Councils last February which said that no objections had been received to the main purpose of the first draft. It proposed that new statutes should be subject to the agreement of at least two-thirds of the governing bodies of schools and that any major constitutional proposals should be the subject of full consultations with both the schools and teachers of the university.

A clause was also included in the Bill to satisfy the demands of Convocation. Although only tentative and subject to final approval it could substantially strengthen the hands of Convocation if included in the final draft.

The first draft Bill said that Convocation should receive at least three months' notice of proposed statutes but after the strong threat of opposition the second draft included a clause which, if approved, will mean that Convocation's consent will be needed for any statute altering Convocation's statutes, purposes or powers. It is this clause that has caused anger among AUT members and was a primary cause of their objection to part of the new Bill, now going into its final format.

The AUT argues that the Bill makes adequate provision for students and Convocation but contains very few safeguards for the ordinary academic. Many schools agree. It also claims that the clause regarding Convocation's vetoing power should be deleted completely and maintains that clauses should be inserted to prevent university bodies from making statutes that would reduce the academic independence of the schools.

The AUT has warned that if these and other proposals are not adopted it will oppose the whole Bill when it comes before Parliament this autumn. It wants the existing right of teachers to make representations to the university bodies before statutes are made to be preserved and is calling for assurances that teacher senators are elected by their fellows in their own schools, that the proportion of teacher senators is kept at not less than 60 per cent of the total senate and that a representative academic staff assembly is created.

A major objection to the Bill is the degree of teacher representation on the senate. The consultative committee now proposes 30 out of 111 members, or 27 per cent. At present, excluding heads of schools, teachers at the university have 16 out of 59 members of Senate, about 30 per cent.

The AUT objection adds the present proposals providing 32 student and convocation members to teacher and only 30 teachers, was "quite unacceptable".

The dispute continues but the university is bound to be wary of stimulating any major opposition from the AUT and the 6,000 teachers it represents in London.

The university will have to weigh the balance and faces a rough ride between now and the proposed date for submitting the Bill, in November. A determined revolt by any group could jeopardize the Bill for this year at least.



Microteaching: film aids blackboard techniques.

Red herrings, scapegoats and overseas students

Before the overseas students' fees issue disappears under a welter of figures in the current Government expenditure numbers game, it is essential to focus on four crucially important points.

First, we should not accept the principle of cuts in educational expenditure, nor their abysmal consequences, as a fait accompli.

Secondly, it is important to realize that in the handling of the overseas students' issue, we are witnessing a display of traditional British chauvinism—one which is especially disturbing in the present racist climate.

Thirdly, by international comparison with other developed countries, Britain's cheapskating makes her look both absurd and contemptible. Lastly, the Government's policy will hit students from the least developed countries hardest and benefit members of the richest social strata here in Britain.

In relation to these points it is clear that the Government's latest policy decision on overseas students smacks of cynicism and hypocrisy. After some stories that overseas

students were to be charged £2,000 a year for a British education, we are presumably meant to sigh with relief now the figures are more "realistic".

Furthermore, by getting rid of the differential between home and overseas students' fees on degree courses the Government would seem to be according to those who have condemned the system in force since 1967 as inequitable.

But it would be truly disingenuous to see this as anything other than a totally insubstantial manoeuvre to appease those who are against discrimination.

The real consequences for foreign students of this decision are predictable. Those who come from the poorest countries, and those who, while intellectually able, are hardest hit.

According to the National Union of Overseas Students in Britain in 1973, 74 were from underdeveloped countries, that is, from countries where the gross national product was below \$1,500 per head. The British Council estimates that some 75 per cent of these students have to find their own finance. To the relative few from oil-rich families is to "give vent to an ugly

outcome is sure to be to do it work. Fee rises then reduced the number of overseas students by some 6,000/7,000 for the following year. But this time there is no hidden hand to determine ultimate supply. Instead, the Government proposes

to apply a global *numerus clausus* to overseas students. The quota laid down between 65,000 and 70,000 to be admitted each year, will doubtless pose considerable administrative problems.

This policy received anticipatory endorsement in the recent Committee of Chancellors and Principals Joint Working Party report on tertiary education. It is quite banal to say that institutions committed to an international outlook and with as national ones should as well turn themselves into proxy immigrants.

On this latter point it is essential to see that any policy of "keeping foreigners out" at this time will be seen as far from unpopular. Those overseas students who will now manage to come to Britain for education will be an added social consequence of the Government's policy.

In addition, Mr. Mulley's policy has a curious implication nearer home. Doubtless as part of strategy to narrow income differentials, he is tempting the few wealthy members of our society to pay the new, raised tuition fees and asking only that they maintain their offspring.

On grounds of equity, therefore, the present policy on fees must be opposed. It is inherently discriminatory.

It should also be realized that the entire argument about what overseas students pay more is one guided. Any seriously misguided. Educationists who accept this as the terrain on which debates

should be conducted have already accepted the spurious rationality of the Government's attack on education. There is still a fight against the policy of retrenchment. Education, at 25 per cent of the total, takes up the largest single share of a recently announced expenditure cuts. To lose sight of this is to forget that there is currently a determined assault on the social wage in this country.

In this context Mr. Mulley's putative £28m saved is a red herring. It is part of a strategy to make scapegoats of an easy and unpopular target without any real commitment to genuine improvement.

The view that the more we control the entry of foreigners, the better all things be for us in Britain is precisely the sales pitch of bodies such as the Inner London Education Authority, which argued in a recent policy document that a quota would "release resources for further the provision for those who work and live in London".

There is no guarantee that such shifts in provision actually occur. The central point here is that those who accept these retrenchment have already conceded without so much as a fight.

It is generally accepted that science and engineering courses are the most attractive to British students. These are precisely the most popular fields among overseas students. Evidently, the Government is preparing for a severe reparation of its policy on these areas.

For in evidence to the House of Commons Select Committee on Science and Technology

and the Department of Education said they were considering the report proposed. Individual British students in the first report and engineering in the second report.

Apart from the chief trends in reactions to the report and outlined steps it was intended to take to make further progress in discussion.

The second report, more controversial than the first, and including a number of proposals by a newly-formed committee on the constitution, was published in November, 1974. It

British come very much more acceptable, the policy shift was about the growing pessimism about the federal system should continue with the exception of a broadly designed to extend participation in government by teachers and students and to improve policy

While the approaching departure of the Logan, its principal for 26 years, with the Murray turmoil at the time, many feared that his going could result in a complete collapse of the system of governance. The time was ripe to make major changes in the role of the vice-chancellor, previously an unelected, part-time official, and the principal, hitherto the university's senior administrator.

Consequently changes in the statutes were pursued. Six months before the second report, the London School of Economics, principal of the schools should be more explicitly outlined in any final version that is submitted to Parliament: they should be more involved in any statutory changes.

We at LSE do not see any particular reason for constitutional change.

Dr Peter Griffiths, secretary of the consultative committee: We hope to go ahead with the Bill in November. There will be discussions in the meantime and we hope to reach a satisfactory conclusion over some matters included in it.

Once passed it would be stupid to pretend that everything will be simple, but the university will have more flexibility.

There will be consultation on the draft statutes when published in the next few weeks. Final submissions will be required by next March.

Professor Ralf Dahrendorf, principal of the London School of Economics: Safeguards for the schools should be more explicitly outlined in any final version that is submitted to Parliament: they should be more involved in any statutory changes.

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NORTH AMERICAN NEWS
MICHAEL BINYON reports
from Washington

Private sector holds its own against inflation

In contrast to the gloomy forecasts for private colleges and universities that were still being made last year, the most recent and detailed study of this important sector of American higher education shows that institutions have maintained and expanded their programmes, increased enrolment and experienced a wave of innovation in teaching methods.

The second in a series of reports on private colleges and universities produced by Dr Howard Bowen and Dr John Minter and published by the Association of American Colleges (details of the first appear in THE TIMES of December 19, 1975), the study said the private sector in the past year was "steadfast without stagnancy".

Enrolment in the past two years had increased by 1 per cent a year. The rate of student attrition has remained unchanged and the student/teacher ratio has held steady.

Despite inflation of 11 per cent in 1974-75, revenues per student in real terms, declined by only 2.4 per cent, which the study called a "remarkable achievement in a year of hyper-inflation".

The growth of assets outpaced the growth of liabilities, so that the net worth of the institutions went up by about 5 per cent and the net debt declined. Occupancy rates in halls of residence increased slightly.

The study said that college presidents were cautiously optimistic, and not a single one thought his institution would deteriorate seriously in the next five years. Nor was there evidence of retrenchment of academic programmes or erosion of educational quality.

All this is good news indeed to the private sector. It is more optimistic than the two authors' first survey, in which they identified about 27 out of the 100 sample in-

stitutions as "in distress". Now, they say, not a single one of these 27 has disappeared, and some have gained ground since last year.

There are still worrying trends, however. These include:

Competition to get students is keeping keener each year, and is reflected in a decline in the colleges' selectivity in admission policies.

The academic preparation of new students has been falling in recent years, with an "appalling decline" in their abilities in reading, writing and mathematics.

Revenues have not fully kept pace with inflation, and unless inflation is brought under control, colleges may have difficulty in maintaining quality.

The proportion of students coming from States other than the one the college is in has been slowly declining.

Teachers' salaries have not kept pace with inflation, although they nearly did so in this current year.

The dollar gap between public and private fees widened in 1975-76.

The authors point out that nearly all the difficulties are related to inflation. But they have not yet caused serious damage. The reason is that colleges have deferred some essential expenses (library acquisitions, for example), cut back slightly on salaries and mended their teachers' work longer hours.

The colleges themselves attribute their staying power to the growing State and Federal programmes of aid to students and institutions. The authors conclude: "It has also been due to careful management, to the continuing support of friends and donors, and to the evident fact that private institutions continue to be attractive to millions of students."

Liberating the military

Two bastions of male military education—the United States Military Academy at West Point and the United States Naval Academy at Annapolis—fell last week to the first wave of women midshipmen (as they will be called) and cadets.

At West Point 119 women took the oath of allegiance, and began the traditional two months' grueling training in "Beast Barracks".

In order to maintain its exacting standards the only concession West Point is making are substituting the bar-mat for arm-pull-ups as one of the physical tests (women are physically unable to pull themselves up on a bar) and grouping women in clusters in the halls of residence for "supportive female company".

Meanwhile, the inquiry at West Point into the cheating scandal continues. Officially 173 cadets are now accused of cheating during an examination in March. Some 148 still await hearings.

West Point, however, is now free of one embarrassment. Cadet Stephen Verr, who caused a scandal when he said he had been beaten up and harassed for years, has been dismissed from the academy after failing a mathematics examination.

Colleges 'used by CIA'

Teachers and administrators on more than 100 campuses acted as recruiters for the Central Intelligence Agency, according to Dr Morton Halperin, a former member of the National Security Council. These recruiters identified students and others on campus who might be persuaded to become full-time secret employees of the CIA.

Dr Halperin told the annual meeting of the American Association of University Professors in Santa Barbara that recruiters looked for people who were about to go on a particular trip or attend a particular conference, and who therefore might become secret temporary employees of the CIA.

The recent Senate investigation of the agency had now thrown the problem back to the academics, Dr Halperin said, since Congress said the matter should be resolved on other bodies should persuade universities to draw up their own rules and procedures on secret recruiting.

The AAUP has already protested the activities of both the CIA and the FBI in universities and colleges.

Senate aid for medics—but with strings

The Senate has unanimously passed a Bill that requires medical schools to channel more of their graduates into general practice as condition of receiving Government aid.

The measure aims to ensure that medical schools admit quotas of students who promise to practice in medically understaffed areas: general internal medicine, pediatrics, obstetrics and gynaecology.

Next year the medical schools must ensure that at least 42 per cent of their "residency" programmes (postgraduate training) are in these fields. In 1978 the figure would be increased to 47 per cent, and by 1979 it would be 57 per cent.

Congress has been trying to pass new legislation on health manpower for the past two years, but the Senate and the House of Representatives have not been able to agree. They are now broadly in agreement, and their Bills, which are now to be resolved into one, authorize \$3,100m until 1980 for health manpower programmes.

The Senate has dropped a measure that was strongly opposed by university medical schools. This called for the setting up of a National Council on Postgraduate Physician Training and a network of 10 regional councils to help the Secretary of Health, Education and Welfare decide how many postgraduate training programmes should be offered each year.

These councils would have had power to assign a specific number and type of residencies in affiliated hospitals throughout the region.

The Senate also wanted the Government to certify all residency programmes in an attempt to correct the uneven distribution throughout the country of specialists, but this was opposed by the universities, which argued evaluation of the quality of programmes had always been effectively done by private groups.

The present compromise calls instead simply for a study of the type of doctors needed and the areas of need, and sets the residence percentage.

The Bill also increases aid to medical and dental students, allowing Government-backed loans of up to \$10,000 a year.

City university gives up independence

One of the last municipally supported universities in America, the University of Cincinnati, has lost its right to remain a city university and will be fully absorbed in the Ohio State system by July. It could no longer afford independence.

That will leave only the troubled City University of New York as the last of a number of distinguished institutions serving and controlled by the cities which pay for them.

The University of Cincinnati, founded in 1819 as a private college, was taken over by the city in 1871 and was supported by a property tax levied on the Cincinnati residents.

Like the City University of New York, it was meant to serve the urban poor, as well as a major role in civic life. But the university, which started with a policy of frugality, soon ran into financial trouble, and this has been a worry ever since.

As the city's tax base declined with the move to the suburbs the richer residents, and as the student population rose—to 35,000—the university depended more and more on tuition fees.

In 1967 it came to an arrangement with the state, whereby Ohio would subsidize to about \$1,000 a student (about \$650 less than the amount paid to other State colleges and universities).

Now Cincinnati voters have agreed by a majority of more than four to five to transfer the university's assets to a Board of Trustees nominated by the State and to end the municipal levy for university support.

Professor Martin Lipset discusses the implications of the growth of faculty militancy

Rise in unionism will be 'key source of conflict'

The occasional alliance between students and university administrators against the demands of faculty is just one of the odd twists of fate that Professor Seymour Martin Lipset sees as American universities gradually head towards widespread academic unionism.

It is a development that is not fully recognized by academics, Professor Lipset says. Some professors, especially the younger ones, get upset when it is suggested to them that there may be a conflict between the collective aspirations of faculty and the interests of students, he believes.

The faculty fail to see that wage rises, for example, could force the administration to raise tuition fees. Students, who are now among the consumers in the education structure, will vote with their feet and choose not to attend a department or school whose fees they regard as too high.

Also, faculty, who are increasingly sympathetic to students having more say in university decision making, often have deep qualms about student claims that tripartite negotiating arrangements should be established when faculty unions are dealing with university administrators on campus conditions, Professor Lipset suggests.

Professor Lipset, 53, is half of a two-man team which has gained considerable recognition of late for its analysis of beliefs held by academics in the United States. His partner is Professor Everett Carl Ladd, from the University of Connecticut. Their major work, *The Divided Academy*, was published last year.

Professor Lipset is now at Stanford University where, after 10 years at Harvard, he has accepted a joint appointment of senior fellow in the Hoover Institution on War, Revolution and Peace and a professorship of political science and sociology.

Ladd and Lipset have just co-authored a series of 15 articles on the professional attitude to a wide range of issues, including education, politics and culture. The articles, based on a response to 87 questions by 3,536 academics from 111 institutions, appeared weekly earlier this year in the *Chronicle of Higher Education*.

The growth of faculty unionism in an era of increasing austerity promises to be the source of the most important institutional conflicts in academe in the next decade, Ladd and Lipset say in their survey.

Of the nation's 3,000 campuses, 410 have bargaining agents chosen by faculty. About 95,000 faculty members out of the 600,000 are employed in unionized schools. But, say Ladd and Lipset, academics are more disposed to accept collective bargaining than covered by institutions now covered by contract negotiators.

The percentage of faculty members favourable to bargaining has been gaining steadily in the survey: 69 per cent rejected the notion that bargaining has no place on the 60 per cent in a similar survey in 1969.

Unionism is largely found in two-year and four-year colleges rather than in universities; ironically, say Ladd and Lipset, it is the latter which have the more liberal staff, more inclined to support the philosophy of collective unionism.

Professor Lipset is anxious to point out that the acceptance of unionism by academics is by no means automatic. He says the inability of unions to prevent recent retrenchments will put back the union cause.

Five colleges go on black list

Five institutions have been added to the list of colleges and universities under censure by the American Association of University Professors, bringing the total to 43.

The institutions are Arizona State University, Blinn College (Texas), Marquette University, Murray State University (Kentucky) and St Mary's College (California).

There is, too, rivalry between three main unions—the American Federation of Teachers, the National Education Association and the American Association of University Professors. Some say all three are represented by the others, Professor Lipset says.

The AFT, the most militant of the three, has a long history of conflict with the Congress of Industrial Organizations. Ladd and Lipset think there will be a new alliance between the two.

They refer to the NEA as a wealthy, large professional union that originally was exclusively school teachers' professional organization of lawyers.

Munich University has lost 181 posts and now fears the abolition of a further 135, especially in subjects concerned with teacher education. The university says that under these circumstances a further tightening of the numerous clauses will be inevitable.

This, however, fits in with the long-term aims of the Bavarian government of reducing the 34,000 students of West Germany's largest university by between 8,000 and 10,000. On the other hand, Bavaria's other universities are not able to absorb these students.

In Baden-Württemberg each university was told it had to abolish a specific number of posts. It was left to individual institutions to decide this drastic pruning of its scale of development will do the damage this drastic pruning of its scale of development will do the damage this drastic pruning of its scale of development will do the damage.

Professor Lipset: "What does it mean?"

and local leaders who will be from total identification of organization as trade unions, and Lipset say in reference possible alliance.

This touches on another field—the academic belief in professionalism and advancement by merit and scholarship rather than wages and benefits.

The Ladd-Lipset survey up to extend the egalitarian principle of trade unionism to the oriented graduate training would undermine current post at major universities.

"Many scholarly faculty must see the crucial, developmental role of the academic system as a desirable way of maintaining successful to continue to improve themselves."

Thus, says the survey, the choice of a Coloured educationalist, Dr R. E. van der Ross, as head of the Coloured University of the Western Cape last year.

The appointment follows the choice of a Coloured educationalist, Dr R. E. van der Ross, as head of the Coloured University of the Western Cape last year.

Mixed hostels are 'more economic'

A survey of student residences found that those which are mixed by sex are better value for money. They are better equipped and have more facilities to use the space and building changes in student housing.

The survey, by a Chicago housing architect, looked at 21 colleges and universities with student populations ranging from 500 to 20,000. It found that mixed housing was 30 per cent more economic than single-sex housing.

Günther Kloss reports on the effects of higher education retrenchment in West Germany

Cuts seen as way to avoid future graduate surplus

For the second year running universities in all parts of the Federal Republic are suffering from enforced cuts in their annual expenditure allocation which forms part of the budgets of the Ministries of Education in the Land in which they are situated.

Imposing these cuts the Länder governments appear to want to not only achieve actual savings of expenditure but also to reduce the number of university graduates by lowering the universities' student capacity. While graduate unemployment in general has remained below the national unemployment level several thousand teachers are now without jobs and the regional Ministries of Justice have just warned of a possible future surplus of lawyers.

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Patrick Knight looks at university development in oil-rich Venezuela

Lack of top talent to meet growing need for skills

Although Venezuela's higher education budget virtually doubled from one year to the next in 1974, following the oil price rise, there is still considerable discontent in the universities.

A major problem is that university administration, like administration in general in Venezuela, is still in the hands of a few people, following the oil price rise, there is still considerable discontent in the universities.

Student drop-out and failure rates remain very high: 82 per cent of those who do not complete the two-year course of full time. Every pupil who successfully completes secondary school has a right to a university place in the discipline of his choice. To tamper with this has proved politically unacceptable.

Most of the intake is weeded out in the first two years, and the level of graduates who have fought his way through all the obstacles is as high as anywhere in Europe. The enormous numbers of students make the atmosphere more like that of a large comprehensive. There are, for example, 6,000 students of engineering following the basic course at Caracas Central University; 130,160 attend classes at a time. Additionally the old disciplines of law and medicine retain their prestige: there are 50 or 60 per cent in law and 50 or 60 per cent in medicine.

Only about 25 per cent of academics depend on their salaries alone, although these are now quite an adequate living wage. Salaries range on a scale between £250 and £1,000 a month, with some senior officials on Government appointments. They are only nominated for the five-year term of the administration, and are really only concerned with what they can achieve in that time. A policy for this administration, now four years old, has not yet been agreed.

It is indicative that Venezuela, which has been a major oil producer for 30 years, still does not have an adequate research programme for the oil industry. When the assets of the 14 operating companies were nationalized at the beginning of this year, contracts were signed with them to continue to provide services from their research organizations abroad. A hefty fee will be payable for this, though the step of nationalization had been anticipated for several years.

The massive oil reserves of the Orinoco River basin, for example, which will require special techniques to extract and process economically will probably have to be exploited by techniques developed abroad, and with foreign capital and personnel, although the type of oil and its problems are unique to Venezuela.

One resource the country could employ immediately are the refugees from several of the more advanced Latin American countries now in Venezuela. Among them are 45,000 Chileans, 20,000 Uruguayans and 20,000 Argentines. It is agreed that substantial immigration will have to be encouraged if the aims of the Fifth National Plan are to be achieved. These include producing 15m tons of steel, setting up a major ship-building industry, building a new national rail network and an underground system for Caracas.

Immigration, however, is an issue which still causes considerable controversy. Probably for this reason, most of the refugees, many of them highly qualified academics, have had to seek employment outside the universities.

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Part of the Caracas University complex.

Most academics use their university post to give them prestige in their profession, and are hardly present on the campus except when giving classes. There are cases, notably of doctors, who have contracted, up to 24 hours of work a day. They spend a few hours giving classes in two or three universities in Caracas, work at a teaching hospital, at a State clinic, hold surgeries at several private companies and finally have lucrative private practices. Doctors and other professionals earning up to £10,000 a month in this way are not unknown.

The Central University of Caracas has a £100m budget for its 60,000 students, who are housed in very exotic, but now tumbledown and neglected, buildings on a precinct designed for 10,000. Murals and sculptures by artists of the stature of Leger are falling apart for lack of maintenance. Only 3 per cent of the money is spent on maintenance and research, while 97 per cent goes on staff and administrators' salaries.

A National Research Council (CONICIT) was established two years ago to produce a policy for research. Like every other institution in Venezuela, it is constrained by political considerations, and its senior officials are Government appointees. They are only nominated for the five-year term of the administration, and are really only concerned with what they can achieve in that time. A policy for this administration, now four years old, has not yet been agreed.

It is indicative that Venezuela, which has been a major oil producer for 30 years, still does not have an adequate research programme for the oil industry. When the assets of the 14 operating companies were nationalized at the beginning of this year, contracts were signed with them to continue to provide services from their research organizations abroad. A hefty fee will be payable for this, though the step of nationalization had been anticipated for several years.

The massive oil reserves of the Orinoco River basin, for example, which will require special techniques to extract and process economically will probably have to be exploited by techniques developed abroad, and with foreign capital and personnel, although the type of oil and its problems are unique to Venezuela.

One resource the country could employ immediately are the refugees from several of the more advanced Latin American countries now in Venezuela. Among them are 45,000 Chileans, 20,000 Uruguayans and 20,000 Argentines. It is agreed that substantial immigration will have to be encouraged if the aims of the Fifth National Plan are to be achieved. These include producing 15m tons of steel, setting up a major ship-building industry, building a new national rail network and an underground system for Caracas.

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Dr Startup is a lecturer in the department of sociology at University College, Swansea, and Dr Grimsberg is a lecturer and Ms Amaze a research assistant in the college's department of psychology.

BOOKS

Matriliny's failure

Catholic mission

B. C. Richardson

Counting the faithful

In this lies the theme's excitement. While Victorian Edwardian Nonconformists never more than held their own, Anglicans moved to offensive, their confrontation defining the nature of political and social controversy. But the Established Church paid a heavy price: it became a marginal denomination, albeit the most respectable of many jostling in a religious market-place. Worse than that, the state of religious pluralism to which Anglicans adapted themselves was a pause on the way to a fully secular society. The Established Church never had its last ground, just as the Nonconformist Churches never did.

Good at the grass-roots

Complexities of Thai culture

Kirsch and Jasper Ingersoll continue the evaluation of the place of Buddhism in structuring Thai society. In contrast to Moerman Kirsch emphasizes the non-economic roles of Thai men which he explains by the close association existing between sacred categories and the general socio-political hierarchy of Thai society. Ingersoll focuses on the individual in an interesting attempt to

Overall the volume addresses the growing sophistication of the studios. In opening up the world of a culture as complex as Hollywood, it is inevitable that it will become somewhat inward-looking. Happily though, there are signs that many have recognized this and this volume may inspire more than just the Thai specialists.

Jeremi

Among this week's reviewers

R. E. Pahl is professor of sociology at the University of Kent;
R. C. Richardson, has written *Puritanism in north-west England* and is senior lecturer in history at the Thames Polytechnic.

R. C. Richardson

Dudley, later Duke of Northumberland, his successor as head of the Government.

Henry's VIII's will had entrusted government during the minority to a select group of executors who were to form the Council. Somerset arrogated quasi-royal power to himself, reconstructed the Council, and treated it with conspicuous and un-royal contempt. His downfall was

not only due to the spectacular failure of his policies (perhaps under-emphasized here), but also the vengeance of slighted political circles.

Dudley, by contrast, governed through the Council, at least ostensibly, though rigging its membership to his own interest by implication. He was a man who manipulated the king. Where Professor Jordan painted an unlikely picture of a 14-year-old politician who was a "man of letters," he produces a more credible picture of a intelligent boy who enjoyed making lists and could be persuaded that copying or amending drafts was a useful exercise. He also suggests that the special Council Committee "for the State" was merely a device to educate and humour the king's stalling elaborate debates and decisions and already bore the seeds of disaster elsewhere.

Two incidents are put under the microscope. Somerset's initial seizure of power, and Dudley's double-crossing of the king. Both incidents which had helped him bring

Somerset down, just before the double-crossed him. Both are tentative reconstructions of fast-moving and baffling games. Perhaps the most interesting point was the potential importance of the case, and the rather shadowy figure of Thomas Wriothesley, Earl of Southampton, the victim on both occasions.

But the book is not a history of an administration and the policy. Since the Council was the government, it must have been difficult to define the scope of the book. The section on potential points of contact is useful. Hoak has interesting things to say, but, inevitably, his treatment is too brief to carry complete conviction. The reconstruction of the political game. With this book and Michael Bush's recent *Government and Policy of Somerset*, the case of Somerset long treated too cursorily or uncritically is being opened up to serious historical understanding. Let us hope that plety is not replaced by an equally exaggerated cynicism.

C. S. L. Davies



Battista Franco's engraving (1549) of the front and right end, reversed, of the Bacchic Sarcophagus which came into the British Museum in 1805. From *The Classical Tradition*; The British Museum Yearbook published by British Museum Publications at £7.50.

هكذا في الأصل

BOOKS

State of ecology

The Economy of Nature
by Robert E. Ricklefs
Chiron Press, \$13.95
ISBN 0 913462 04 7

Ecology and Evolution of Communities
edited by Martin L. Cody and Jared M. Diamond
Harvard University Press, £17.70
ISBN 0 674 22444 2

Ecology was the term coined more than 100 years ago to describe the pursuit of knowledge which might properly be considered the description and explanation of the total relations of organisms with one another, and with their non-living environment. The subject matter of ecology is thus so wide that the professional ecologist and interested amateur alike can only hope for a podding acquaintance with the details of many of its aspects. It should be recognized, nevertheless, that there are basic principles, unique to ecology, that can be understood by all and which are applicable whether one's interest is as an agriculturalist, mathematical modeller, natural historian or water engineer. At the present time many reserve the term ecology for their own special area of interest; no wonder that in many ecology is inchoate. Ricklefs's book should do much to correct this impression.

He has provided an admirably written general account of the present state of ecology. It is a broad, yet comprehensive, treatment of ecological principles and ranges from the interrelations of individual organisms with their non-living environment to the complex interactions of the living and non-living parts of diverse ecosystems. We learn why and how organisms live where they do; it is not simply a matter of suitable climatic conditions but depends upon the presence or absence of food, living space, competitors, parasites and predators. Factors such as these may also govern the population densities and exploitable production that organisms can attain in a given set of circumstances. Clearly, circumstances vary with time and so the question of whether populations and communities are discrete units which persist through time is considered, as is the differing number of species that can be packed into a given habitat. The picture is one of a dynamic, ever-changing world which yet in the broadest sense is stable in the face of natural perturbations, a balance of nature which has arisen through evolutionary processes over millions of years.

By observation, experimentation, intuition, born of experience and more recently mathematical modelling, a body of abstract concepts has been built up to explain the

structure and function of nature; these are the principles of ecology and Ricklefs has presented them in a clear, lucid manner. The role of man in the economy of nature has been deliberately avoided but the message is clear—he does not stand apart from nature and would do very well to pay it greater attention for the economy of man is no substitute.

Ecology and Evolution of Communities is a volume for specialists. It is a collection of 18 papers intended as a memorial from former colleagues and students to an outstanding American ecologist, Robert MacArthur who died aged 42. There is no doubt that MacArthur's reputation rests on a number of topics which are central to ecology—species, diversity, species packing, competition and niche theory, life histories and strategies of single species and island biogeography. His considerable mathematical insight was used in the production of predictive models for many of these aspects and stimulated ecologists the world over to critically examine the concepts they accepted intuitively.

The memorial symposium papers are arranged in four sections, the evolution of species abundance and diversity, competitive strategies of resource allocation, community structure and outlook. Each section has its own attraction and the whole reflects MacArthur's broad outlook. But the broad outlook is not evident in many of the individual contributions and the book title cannot be said to reflect its content.

The papers in the early sections are primarily in the realm of theoretical ecology and deal with mathematical models which present a series of possibilities that require testing in nature. The central core of papers has elements of field observation and modelling while the later papers deal with field observation and informed speculation. Each paper presents a point of view and some of them will be regarded as containing sufficient new ideas or analytical approaches to classify as future key works in the discipline of ecology. This volume should be read by all professional ecologists.

Perhaps the most pertinent point is in the contribution by C. E. Hutchinson. MacArthur's early mentor: "Many ecologists of the present generation have great ability to handle the mathematical basis of the subject. Modern biological education, however, may let us down as ecologists if it does not insist on it and still shows too few signs of insistence that a wide and quite different understanding of organisms, past and present, is as basic a requirement as anything else in ecological education. It may be best self taught, but how often is the difficult process made harder by the misplaced emphasis on a quite spurious modernity. Robert MacArthur really knew his warblers."

John Phillipson

Pedological

Tropical Soils: Classification, Fertility and Management
by P. S. C. P. Kalpagé
Macmillan, £12.00
ISBN 333 19276 1

For the first time we have a book on the soils of tropical countries written by a scientist from one of them; Sri Lanka, Professor Kalpagé's country, is a microcosm of tropical soil types. Although not set out as such there are two main sections in this short book, on pedology and on soil management. The first opens with a highly simplified account of the tropical environment. The vegetation classes recognized are rain forest, tropical grassland, monsoon vegetation, desert, woodland and mountain flora, whilst a map of the world shows only two classes of land.

Each of the major soil classification systems are described, with a correlation table. But like many others (and in my opinion rightly) the author employs a natural classification for the remaining text, where it is necessary to be able to make valid generalizations about the soil types discussed. He uses terms such as reddish-brown latosolic soil, red-yellow podzolic soil, reddish-brown earths, with Sri Lanka used to those familiar with the soil types of that country, but is not unique to that country, but is a term for the fertile soils derived from basic rocks found in all continents.

In the second section, the management systems of shifting cultivation, intensive arable cropping, irrigation, rice cultivation, plantation crops and grassland farming are each discussed from the point of view of their dependence and impact on the soil. A genuine attempt is made to integrate pedology with land management.

The book is a useful account of the fertilizers of 21 tropical crops. A short chapter on the use of the tropics is perhaps the most interesting and original. It is only in these closing chapters, on soil management in general and fertilizer treatment in particular, that the requirement for the authority that comes from wide practical experience. The original edition was published in India in 1974. It is regrettable that the publishers have not given the author a fair start, the standard of printing being such as is rarely seen in this country.

Anthony Young

Mother earth

The Soil: An Introduction to Soil Studies in Britain
by F. M. Courtney and S. T. Trudgill
Edward Arnold, £3.25
ISBN 0 7131 1987 X

Courtney and Trudgill have attempted to break with tradition in this brief introductory text by using a "systems" presentation rather than the usual approach through the factors and processes of soil formation. This has scientific advantages but has meant that processes of soil formation have become scattered through the early part of the book.

Emphasis is placed on cheluviation in chapter one and other processes are not introduced until chapter three, when leaching, leaching, podzolization and gleying are discussed. The authors describe the main soil types which result from these processes—acid brown earths, brown earths (soils less developed), podzolic brown earths, podzols, calcareous soils and gleys—and illustrate their development with case studies.

In attempting to simplify, a number of misconceptions occur. For instance the first four soils mentioned above are not solely dependent

on a rainfall input but on the interplay of climate (including rainfall), parent material, organisms including vegetation, man, over time. Contrary to the author's diagram a podzol, in earth does not have a deep horizon.

The components and processes of the soil are adequately dealt in chapter two and the application of soil studies in biology and agriculture are emphasized in chapters four and five. The classification used by the Ministry of Agriculture is described, although mention is made of the parallel final chapter brings together the soil nomenclature and classification used in Britain which have been better placed in chapters two and three. Soils will be saddened to find little mention of the soil survey of Great Britain north of the border, but the authors' concept which characterizes mapping of the Soil Survey land.

Despite the criticisms, a useful book which will do much to help understand one of the major natural resources.

E. M. B.

Biological guidebooks

Biomechanics
by R. McNeill Alexander
Molecular Virology
by T. H. Pennington and D. A. Ritchie

Hormone Action
by A. M. Makinson
Cellular Recognition
by M. F. Greaves
Cytogenetics of Man and other Animals

by A. McDermott
Chapman & Hall, £1.30 each
ISBN 0 412 13080 7, 12590 0, 13070 X 13110 2, 13910 0

The purpose of the Outline Studies in Biology series is to present to final-year undergraduates and early postgraduate students brief but authoritative introductions to fields of active research in biology. By definition, such fields are not usually dealt with satisfactorily by standard textbooks, nor are they readily accessible through research or review papers. The intention is, therefore, to produce "guidebooks, not textbooks", an intention less easy to achieve than it sounds.

Different fields require different forms of guidebook. Some may require an extensive knowledge of technicalities before any principles can usefully be discussed; others may be characterized by the proliferation of ideas, and a relative paucity of facts. In a brief introduction it is hard to do full justice in either case, or to reconcile the need to cover a range of topics. These five books exemplify the strengths and weaknesses inherent in the series.

Molecular Virology comes closest to the conventional textbook approach. After a brief introductory chapter, the authors systematically catalogue the different forms of virus architecture, their modes of entry into the host cell. This is followed by chapters on the interaction between virus and host, and on the development of the virus. The authors attempt to write in a complete textbook and would certainly be useful to someone already interested in but ignorant of virology. I doubt if it will committ.

In marked contrast to other books in the series, **Molecular Virology** lacks a respectable bibliography. The suggestions for further reading are a mere one of which are dated 1973 or earlier.

One problem that must face authors in the series is what to do with knowledge about the previous author of *Cytogenetics of Man and other Animals*.

length, crossing over, and the like. These are dealt with in the genetics textbooks and are to be familiar with them. In this introductory section predominantly factual advances in biological techniques and observations are presented, and the authors' account of the significance of the heterochromatin and the end of chromosome complement.

In *Biomechanics*, McNeill Alexander discusses the nature of mechanical materials, the relationship between mechanical function and the analysis of animal locomotion, doing so, he describes in great detail the mechanics of the flight of a bird, the swimming of a fish, the jumping of a frog, the running of a cheetah, and the mechanics of the human body. Examples are dealt with rather briefly and would benefit from more detail and greater length; nevertheless, it is an incentive to think mechanistically about organisms, and as a guidebook it is excellent.

Hormone Action and **Cellular Recognition** overlap to some extent in subject matter. The former consists of an introduction to the significance of hormones, followed by chapters on hormones, their receptors, and the mechanisms of their action. The latter is an introduction to the study of the treatment of cancer and the material up to date.

Cellular Recognition is a more recent book, and is more up-to-date, and yet every detail is covered, and the material is presented in a clear, concise, and logical style. It is more relaxed, almost conversational, and yet every detail is covered, and the material is presented in a clear, concise, and logical style. It is more relaxed, almost conversational, and yet every detail is covered, and the material is presented in a clear, concise, and logical style.

Together these five books represent a reasonably representative sample of the Outline Studies in Biology series. In approach and style they vary. Some authors are more readily than others to the point of view of the student, and some subjects lend themselves better than others to a more detailed treatment. In most cases, however, it is hard to think of a better introduction to a subject than the Outline Studies in Biology, which significant advances are being made.

Classified Advertisements

Index to Appointments Vacant, Wanted and other classifications

Appointments vacant
Universities
Fellowships & Studentships
Polytechnics
Technical Colleges
Colleges and Institutes of Technology
Colleges of Education
Colleges of Further Education

Colleges and Departments of Art
Administration
Overseas
Government
Industry
Adult Education
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Appointments wanted
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Universities

UNIVERSITY OF THE WEST INDIES

Applications are invited for the following posts:

JAMAICA

(1) LECTURER IN SOCIAL WORK, Department of Sociology. Appointee will be required to assist with the field work programme as well as teach any two of the following courses in Social Work: Normal Human Growth and Development; Abnormal Development; Organizational Theory and Behaviour; Personnel Management and Industrial Relations. Duties to be assumed not later than 1 October 1976.

(2) TWO LECTURERS/ASSISTANT LECTURERS IN MANAGEMENT STUDIES. Preference will be given to applicants with qualifications in the following fields: Economics Statistics; Macroeconomic Theory; Comparative Economic Systems; Labour Economics; Public Finance and Public Policy; Economics of Transformation. Candidates must have experience in the field of cultural psychology, particularly the socio-cultural determinants of behaviour, and are expected to have an interest in the psychology of religion. Applicants and those wishing to put forward suitable candidates for the post, should apply directly to the Chairman of the Appointments Committee, professor T. Bezeminder, Psychology Laboratory, Erasmus-laan 16, Nijmegen, Holland (tel. 080-512650), from whom further particulars may be obtained. Applications should include a detailed curriculum vitae and list of publications.

(3) SENIOR LECTURER/LECTURER IN ECONOMICS. Appointee will be required to teach at undergraduate/graduate levels. Special consideration will be given to applicants competent in one or more of the following fields: Finance; Accounting; Marketing; Organizational Theory and Behaviour; Personnel Management and Industrial Relations. Duties to be assumed not later than 1 October 1976.

(4) RESEARCH FELLOW/JUNIOR RESEARCH FELLOW IN THE TEACHING OF MATHEMATICS, School of Education. Appointee will be required to teach at undergraduate/graduate levels. Preference will be given to applicants with qualifications in the following fields: Mathematics; Educational Psychology; Educational Research; Educational Statistics; Educational Measurement; Educational Evaluation; Educational Research Methods; Educational Research Design; Educational Research Reporting. Duties to be assumed not later than 1 October 1976.

(5) LECTURER IN THE TEACHING OF MATHEMATICS, School of Education. Appointee will be required to teach at undergraduate/graduate levels. Preference will be given to applicants with qualifications in the following fields: Mathematics; Educational Psychology; Educational Research; Educational Statistics; Educational Measurement; Educational Evaluation; Educational Research Methods; Educational Research Design; Educational Research Reporting. Duties to be assumed not later than 1 October 1976.

(6) SENIOR LECTURER IN LAW. Duties to be assumed not later than 1 October 1976.

Salary scales: Senior Lecturer J\$11,225-J\$18,015 p.a. B\$2424.024-B\$3933.300 p.a. Lecturer J\$6,280-J\$12,533 p.a. B\$1217.750-B\$2435.500 p.a. Research Fellow J\$4,720-J\$9,440 p.a. Assistant Lecturer/Junior Research Fellow J\$3,720-J\$7,440 p.a. (E1 sterling = J\$1.01 = B\$253.56). F.S.U. Unfurnished accommodation will be provided by the University at a rental of 10 per cent of salary. Alternatively a housing allowance of 20 per cent of salary is payable. Study and Travel Grant. Family passages.

Detailed applications (three copies), including a curriculum vitae and naming three referees should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Kingston, Jamaica. Further particulars are available from the same source or from the International Council, 99/101 Tottenham Court Road, London W1P 0DT.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

LIBRARY AND INFORMATION STUDIES

Applications are invited for the post of LECTURER in the Department of Library and Information Studies. Preference will be given to candidates who can teach in the fields of library, information science and library mechanization.

Salary within scale £3,174-£6,446. Referees requests for further details and application forms to: Assistant Registrar (Establishment) ref: 76/362.

Loughborough Leicestershire

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

Lecturers in Ergonomics

Applications are invited for two posts of LECTURER in ERGONOMICS available from September onwards in the Department of Human Sciences. Appointees should be graduates in ergonomics or in one of the related human sciences with research and/or industrial experience. The successful applicants will participate in the teaching of ergonomics at undergraduate and postgraduate levels.

Salary within scale £3,174-£6,446. Referees requests for further details and application forms to: Assistant Registrar (Establishment) ref: 76/362.

Loughborough Leicestershire

KATHOLIEKE UNIVERSITEIT NIJMEGEN
chair readership in cultural psychology/psychology of religion

The successful candidate will automatically become Chairman of the Department of Cultural Psychology and Psychology of Religion in the Subfaculty of Psychology, which at present has a staff of seven lecturers.

The position involves teaching at undergraduate and graduate levels and promoting research, including survey research in the department. Candidates must have experience in the field of cultural psychology, particularly the socio-cultural determinants of behaviour, and are expected to have an interest in the psychology of religion. Applicants and those wishing to put forward suitable candidates for the post, should apply directly to the Chairman of the Appointments Committee, professor T. Bezeminder, Psychology Laboratory, Erasmus-laan 16, Nijmegen, Holland (tel. 080-512650), from whom further particulars may be obtained. Applications should include a detailed curriculum vitae and list of publications.

university of nijmegen holland

THE UNIVERSITY OF UTRICHT

In September, 1976

THE CHAIR OF BIOHISTORY will become vacant

Suitably qualified candidates are invited to apply giving details of their scientific career and listing their publications. The post involves teaching at undergraduate level, lecturing at graduate level, and research work together with staff members and postgraduate research students. Knowledge of the Dutch language is not a prerequisite, but it is expected that after a few years teaching will be in Dutch.

Applications from or suggestions regarding suitable candidates should be submitted to the Dean of the Subfaculty of Biology, Heidelberglaan 2, Utrecht, The Netherlands, from whom further information can be obtained. The salary scale for a professorial appointment is from 167,784 to 1105,998 p.a. (before tax). In addition, there are vacation and children's allowances.

The British Council

invites applications for the following posts:

Adviser in ELT and ESP (Egypt)

Department of English, University of Alexandria
To assist in the development and teaching of a new Master's degree course and to develop postgraduate courses in ESP in Faculties of Medicine, Engineering and Science.

Graduates with TEFL qualifications, 5 years' TEFL experience at university level and ESP experience. Preference for MA or PhD candidates.
Salary: £5,001-£5,845 p.a. tax free.
Benefits: free furnished accommodation; overseas and children's allowances. One-year contract, renewable. 76 AU 81

Lecturers in TEFL (Iran)

British Council Teaching Centre, Meshed
For teacher training, supervision, course design, materials preparation and administrative duties.

Degree or teaching certificate; postgraduate TEFL/TEFL qualification; 8 years' relevant experience, including 2 years' specialised TEFL experience of ESP/teacher training/administration. Single or married candidates eligible.
Salary: £5,001-£5,817 p.a.
Benefits: generous allowance towards cost of accommodation; family fares; children's education allowances; employer's portion of UK superannuation; medical scheme. Two-year contracts, renewable. 76 HO 88-89

English Language Teaching Assistants (Soviet Union)

For universities and institutes of higher education
Degree in English or Modern Languages with teaching or TEFL qualification and relevant experience. Knowledge of Russian highly desirable.
Salary: 225 roubles per month (rate of exchange approx 1.56 roubles=£1) tax free, non-convertible. Sterling subsidy of £1,787 p.a. paid in Britain.
Benefits: subsidised accommodation; employer's portion of superannuation. Contract for one academic year (10 months). 76 SU 86-88

Return fares are paid. Local contracts are guaranteed by the British Council.

Please write, briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post for further details and an application form to The British Council (Appointments), 65 Davies Street, London W1V 2AA.

ABERYSTWYTH THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF PHYSICS
Applications are invited for a post of LECTURER in PHYSICS. The post involves teaching at undergraduate level, lecturing at graduate level, and research work together with staff members and postgraduate research students. Knowledge of the Dutch language is not a prerequisite, but it is expected that after a few years teaching will be in Dutch.

Applications from or suggestions regarding suitable candidates should be submitted to the Dean of the Subfaculty of Biology, Heidelberglaan 2, Utrecht, The Netherlands, from whom further information can be obtained. The salary scale for a professorial appointment is from 167,784 to 1105,998 p.a. (before tax). In addition, there are vacation and children's allowances.

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Closing date July 21, 1976.

Ecology and Earth History
by Richard M. T. W. Friesen
Croom Helm, £5.50
ISBN 0 85664 038 7

This volume in the Biology and Environment series is very much one man's view of the relationship between life and their relationships with the inanimate components of the planet. The immense scope suggested by the title is borne out by progress from general principles of ecology through the formation of the earth and the origins of life, the evolution of Metazoa, photosynthesis and energy pathways, the cycling of elements, the interdependence of life forms, the emergence of man, and man and earth ecology, all the way to the global ecosystem.

This is a considerable task in 113 pages of text and index and it is a great strength of the book that the author has had the vision of blending past and present into a continuum, thus putting man and some of his more tiresome habits into a longer time perspective than some writers on these topics.

Because of its brevity and compression there is sometimes an ambiguity of style which leads to an apparent contradiction or lack of clarity. It is not immediately obvious what is meant by the "ecosystem" (page 112), for example, that on page 100 the author says "urgency of sexual instincts can be children" yet on page 103 "sexual condition is said to lead sexual habits", which are "unnatural behaviour".

There are also statements which, because of the conciseness of treatment, are given as accepted fact: the cyclic model of human history, "prosperity" followed by decline (page 100) may not appeal to everyone, but the author himself avers that since the Christian era we are more tolerant and better off than we ever were. It is unjust to select phrases out of context, but they do give the flavour of the alternative interpretations that can be made of much of the material in chapters seven to nine. However, to stimulate the reader into thinking

about the issues raised is no doubt one of the author's purposes.

The production of the book has a few minor flaws. The diagrams planned: a map of faunal regions should have the boundaries between regions indicated, and the energy diagram has no proper caption and lacks any indication of the units. A keener proof reading would have spotted the notes and references to which they bear no relation, and that an agricultural revolution occurred 10,000 not 10,000 million years ago.

It is difficult to see exactly who the book is for. It is probably not graded enough for most undergraduates in the fields it covers, but at the level it would best be accompanied by a lot of supplementary explanation and commentary. But as a personal commentary on the history of life and man's appearance, the book is a most useful and readable text. It is unjust to select phrases out of context, but they do give the flavour of the alternative interpretations that can be made of much of the material in chapters seven to nine. However, to stimulate the reader into thinking

J. G. Simmons

Polytechnics continued

NORTH STAFFORDSHIRE POLYTECHNIC

DEPARTMENT OF ART HISTORY AND COMPLEMENTARY STUDIES

PRINCIPAL LECTURER

The successful applicant is expected to be a person of high academic attainment, with considerable experience in teaching at degree level. Applicants with experience in Art Galleries or Museums may also be considered. The post will entail some administrative responsibilities.

The person appointed will be required to teach on a new O.N.A.A. degree "BA (HONOURS) HISTORY OF DESIGN AND THE VISUAL ARTS", as well as on existing courses for the 400 students of the Art Faculty, leading to the degree of —

BA (Honours) Multi-Disciplinary Design

BA (Honours) Fine Art

LECTURER II/SENIOR LECTURER

13 posts. Applicants with a general knowledge of Art and Design History will be considered, though preference will be given to those who have a specialist interest in one of the following:

The History of Graphic Design

19th and 20th Century Architecture

20th Century Painting and Sculpture

The successful candidates will be expected to teach students on the above mentioned degree courses.

Appointments will be made of Lecturer II or Senior Lecturer level depending on qualifications and experience.

Salary scales: Principal Lecturer £5,252-£5,954 (bar) £7,810

Senior Lecturer £3,343-£4,247 (bar) £4,729

Lecturer II £2,871-£3,485

Further particulars and application forms to be returned by Monday, 28th July, 1976, from The Deputy Director (Staffing), North Staffordshire Polytechnic, College Road, Stoke-on-Trent ST4 2DE

Faculty of Environmental Studies Department of General Surveying and Construction

Lecturer II/Senior Lecturer in Valuation/Planning Studies

Applications are invited from suitably qualified persons to teach at degree level, the professional subjects in the discipline of Land Administration. The successful candidate will concentrate his/her teaching either in Valuation or Planning Practice and areas, in either the public or the private sector of the profession. A cognate degree and/or membership of an appropriate professional institution is required and three years post qualification experience is normally expected. Previous teaching experience desirable.

Salary scales: Senior Lecturer £5,343-£5,729 (Ref. S/AD 276)

Lecturer II £3,343-£3,808

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

NELP North East London Polytechnic

LIVERPOOL

THE POLYTECHNIC

DEPARTMENT OF MECHANICAL ENGINEERING AND PRODUCTION ENGINEERING

POST GRADUATE STUDIES

RESEARCH ASSISTANT

This project, which is undertaken by the Department of Mechanical Engineering and Production Engineering, involves experimental and theoretical work in the field of fluid mechanics, which is supported by an established research programme in the Department of Mechanical Engineering and Production Engineering.

The appointment is for two years, starting October 1976, with a possibility of extension for a further year. The successful candidate will be required to assist in the research programme and to undertake teaching duties in the Department of Mechanical Engineering and Production Engineering.

Applicants should have a B.Sc. (Hons) in Mechanical Engineering or a similar qualification, and should have completed a research project in the field of fluid mechanics.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Mechanical Engineering and Production Engineering, Liverpool Polytechnic, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

LOTHIAN

REGIONAL COUNCIL

DEPARTMENT OF EDUCATION

NAPIER COLLEGE OF TECHNOLOGY

RESEARCH ASSISTANT

Vacancies exist for Lecturers (A) or (B) in MANUFACTURING STUDIES to lecture in a wide range of courses in the Department of Manufacturing Studies, which is concerned with the aspects of industrial and commercial management.

Applicants should possess an Honours degree and/or equivalent professional qualifications and preferably have had industrial, research or teaching experience.

Salary in the range £3,828 to £5,324 (bar) to £5,970 for Lecturers (A) or £3,479 to £4,671 for Lecturers (B).

Further particulars and application forms from: The Academic Staffing Office (2), Napier College of Technology, Colinton Road, Edinburgh, EH10 5DT.

PORTSMOUTH

THE POLYTECHNIC

DEPARTMENT OF EDUCATION

RESEARCH ASSISTANT

Lecturers to assist with the professional education of first school students and teachers. Sound experience working with young children essential. Evidence of advanced study and of potential contribution to wider aspects of the work of the faculty desirable. Salary scales: Lecturer £3,828 to £5,324 (bar) to £5,970 for Lecturers (A) or £3,479 to £4,671 for Lecturers (B).

Further particulars and application forms from: The Academic Staffing Office (2), Portsmouth Polytechnic, Portland Road, Portsmouth PO1 3QQ, to whom completed applications should be returned by August 2, 1976. Ref. V3.

Appointments will be made of Lecturer II or Senior Lecturer level depending on qualifications and experience.

Salary scales: Principal Lecturer £5,252-£5,954 (bar) £7,810

Senior Lecturer £3,343-£4,247 (bar) £4,729

Lecturer II £2,871-£3,485

Further particulars and application forms to be returned by Monday, 28th July, 1976, from The Deputy Director (Staffing), North Staffordshire Polytechnic, College Road, Stoke-on-Trent ST4 2DE

SUSSEX

BRIGHTON POLYTECHNIC

Careers Counsellor

Required from September 1 for work actively concerned with helping students to make educational and vocational choices. Related previous experience essential. Experience in commerce, industry or multi-media administration desirable. Salary: £4,250 to £4,500.

Further particulars and application forms available from the Deputy Head of Administration Services, Brighton Polytechnic, Brighton BN1 9QJ. Tel. 01273 83541. Closing date July 30.

MANCHESTER

TILLY POLYTECHNIC

John Dignan Faculty of Technology

DEPARTMENT OF POLYMER TECHNOLOGY

RESEARCH ASSISTANT

The successful candidate will be required to assist in the research project on the synthesis of new polymers. The project is concerned with the synthesis of new polymers from monomers of various types. The successful candidate will be required to assist in the research project and to undertake teaching duties in the Department of Polymer Technology.

Applicants should have a B.Sc. (Hons) in Chemistry or a similar qualification, and should have completed a research project in the field of polymer synthesis.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Polymer Technology, Tilly Polytechnic, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

SHEFFIELD CITY

THE POLYTECHNIC

FACULTY OF ARTS

MUSIC SECTION

SENIOR LECTURER IN MUSIC

Applications for the above post are invited from suitably qualified persons.

The Section has been formed from the Music Department of the former City of Sheffield Polytechnic and is concerned with the provision of music education and research in the City of Sheffield.

Applicants should have a B.Sc. (Hons) in Music or a similar qualification, and should have completed a research project in the field of music education.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Music, Sheffield City Polytechnic, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

Harlow College of Technology and Art

Academic Registrar

£5,262-£5,565

The Academic Registrar will be responsible to the Chief Administrative Officer of the College for the academic administration and student services and will act as his Deputy.

Duties will be mainly concerned with student admissions, records and assessment, servicing of the Academic Board and its Committees; course publicity; student welfare services.

Applicants (man or woman) should be graduates and/or hold an appropriate professional qualification and possess relevant administrative experience.

Application forms and further particulars can be obtained from the Chief Administrative Officer, Harlow College of Technology and Art, Gortwick, Park, Harlow, HA1 3TP. Telephone No. 844 4411, extension 31.

Closing date: 13th August 1976. Please quote above reference No.

Departments of Art

WEST SURREY

COLLEGE OF ART AND DESIGN

DEPARTMENT OF FOUNDAION STUDIES

RESEARCH ASSISTANT

The successful candidate will be required to assist in the research project on the synthesis of new polymers. The project is concerned with the synthesis of new polymers from monomers of various types. The successful candidate will be required to assist in the research project and to undertake teaching duties in the Department of Polymer Technology.

Applicants should have a B.Sc. (Hons) in Chemistry or a similar qualification, and should have completed a research project in the field of polymer synthesis.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Polymer Technology, West Surrey College of Art and Design, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

Colleges and Institutes of Technology

RICHMOND UPON THAMES

(London Borough of)

TWICKENHAM COLLEGE OF TECHNOLOGY

RESEARCH ASSISTANT

The successful candidate will be required to assist in the research project on the synthesis of new polymers. The project is concerned with the synthesis of new polymers from monomers of various types. The successful candidate will be required to assist in the research project and to undertake teaching duties in the Department of Polymer Technology.

Applicants should have a B.Sc. (Hons) in Chemistry or a similar qualification, and should have completed a research project in the field of polymer synthesis.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Polymer Technology, Twickenham College of Technology, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

Social Science Graduates

£2,927-£4,305

Applications are invited from young social science graduates for a Scientific Officer post with the Social Science Research Council.

The successful candidate will work as part of a team providing the secretariat for the Educational Research Board.

The staff of the secretariat are not themselves engaged in research but provide support for the Board which assesses applications for grants to support research projects being undertaken in universities and independent institutions and which are involved with a variety of other matters relating to research in the field.

Applicants, who should normally be under 27, should hold a good honours degree in one of the social sciences and have an interest in educational research and a

real desire to make a career in administration.

Some experience in administration or research would be an added advantage.

The salary is on a scale of £2,614-£3,992 plus a supplement of £313 p.a. Starting salary may be above the minimum, depending on class of degree and experience.

The hours of duty are 36 per week, excluding lunch hours and the annual leave entitlement is 20 days plus 91 public and privilege holidays. The Council has its own non-contributory pension scheme.

Application forms and further details may be obtained from Mrs. V. Blanton, SSRC, 1 Temple Avenue, London EC4Y 0BD. Telephone 01-353 5252, ext. 110. Closing date for applications, 30th July, 1976.

Appointments will be made of Lecturer II or Senior Lecturer level depending on qualifications and experience.

Salary scales: Principal Lecturer £5,252-£5,954 (bar) £7,810

Senior Lecturer £3,343-£4,247 (bar) £4,729

Lecturer II £2,871-£3,485

Further particulars and application forms to be returned by Monday, 28th July, 1976, from The Deputy Director (Staffing), North Staffordshire Polytechnic, College Road, Stoke-on-Trent ST4 2DE

Appointments will be made of Lecturer II or Senior Lecturer level depending on qualifications and experience.

Salary scales: Principal Lecturer £5,252-£5,954 (bar) £7,810

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EALING Technical College

Specialist Centre for Higher Education

Research Assistant in Sociology or Anthropology

Sociology or Anthropology graduates required to assist with research project on the effects of cultural values on business behaviour. Ability to speak Punjabi or Polish an advantage but not essential. The post is tenable from 1st September, 1976, until 31st August, 1977.

Research Assistant in Economics

Graduate required to assist with research project on aspects of the contemporary maritime firm. Good knowledge of economic analysis and ability to handle quantitative material important. Knowledge of transport economics and a foreign language an advantage but not essential. The post is tenable from 1st September, 1976, until 31st August, 1977.

Salary £3,183-£5,081 inclusive of London Allowance. Application forms and further details from the Registrar (Room No. 17), Ealing Technical College, St. Mary's Road, Ealing W5 8RF (addressed foolscap envelope please). Tel.: 01-579 4111 ext. 287. Closing date 30th July, 1976.

Ealing EDUCATION SERVICE

Harlow College of Technology and Art

Academic Registrar

£5,262-£5,565

The Academic Registrar will be responsible to the Chief Administrative Officer of the College for the academic administration and student services and will act as his Deputy.

Duties will be mainly concerned with student admissions, records and assessment, servicing of the Academic Board and its Committees; course publicity; student welfare services.

Applicants (man or woman) should be graduates and/or hold an appropriate professional qualification and possess relevant administrative experience.

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Closing date: 13th August 1976. Please quote above reference No.

General Vacancies

London School of Accountancy

REQUIRES

Full Time Lecturers

IN LONDON MANCHESTER BIRMINGHAM AND MARGATE ON

Taxation - Auditing
Management Accounting - E.F.D.
£5,000 to £9,000

The London School of Accountancy are the leading Accountancy Tutors in the private sector, with an impressive growth record since the School came into being 11 years ago.

Planned further expansion necessitates the appointment of additional young Lecturers under 30.

Applicants must possess a strong theoretical knowledge coupled with a broad understanding of their subjects, based on sound practical experience. Previous lecturing experience is not necessary as training will be given.

Lecturers are expected to develop, improve and update their lecture material and to contribute to the increased overall effectiveness of courses.

The all-important qualities should include positive personality and humour to deal with students on both a lecturing and tutorial basis.

Salary will be negotiable between £5,000 and £9,000 according to experience and qualifications. Benefits include: interest free loans, free lunches, non-contributory pension scheme, four weeks holiday and, of course, assistance with re-location costs.

Applications to T. Gurney, Careers Director, London School of Accountancy, Prima House, 2/7 Hosier Lane, London EC1A 9LQ

Colleges of Higher Education

CITY OF MANCHESTER

METROPOLITAN COLLEGE OF TECHNOLOGY

RESEARCH ASSISTANT

The successful candidate will be required to assist in the research project on the synthesis of new polymers. The project is concerned with the synthesis of new polymers from monomers of various types. The successful candidate will be required to assist in the research project and to undertake teaching duties in the Department of Polymer Technology.

Applicants should have a B.Sc. (Hons) in Chemistry or a similar qualification, and should have completed a research project in the field of polymer synthesis.

Applicants should submit a curriculum vitae, a list of references, and a copy of their research project report, to the Department of Polymer Technology, Metropolitan College of Technology, by 15th August 1976.

Salary scales: £2,871-£3,485 (Ref. S/AD 276)

Further details and application form from: Academic Staffing Office (2), N.E.L.P., Forest Road, London E17 4JB, Tel. 01-527 2272, Ext. 127.

Closing date: 13th August 1976. Please quote above reference No.

General Vacancies

London School of Accountancy

REQUIRES Full Time Lecturers IN LONDON MANCHESTER BIRMINGHAM AND MARGATE ON Taxation - Auditing Management Accounting - E.F.D. £5,000 to £9,000

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